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THE PETIT MAL EPILEPSIES

THEIR TREATMENT WITH TRIDIONE

WILLIAM G. LENNOX, M.D.
BOSTON

The specific relationship of age to the seizures of epilepsy has been inadequately set forth. Seizures of course may begin at any age between birth and senility, but the incidence of various types of seizures and of various patterns of electroencephalographic seizure discharges is different in children and in adults. A comparison of the clinical and the electroencephalographic diagnoses in 530 children and in 730 adults is calculated from data collected by the Gibbses and Lennox [1] and is shown graphically in figure 1. Forty-two per cent of this group of 1,260 epileptic patients were less than 20 years of age. Yet, of those having only petit mal, 84 per cent were under 20 years. Of those whose electroencephalograms were of the two per second spike and wave pattern (petit mal variant), 80 per cent were under 20 years, and of those with the three per second dart and dome formation (petit mal) 65 per cent were not yet adult. Tabulation based on the age of the patient when seizures began would be even more specific. I remember no case in which petit mal (pyknoepilepsy) began after the twentieth year. Inspection of this figure makes clear the fact that seizures associated with an alternate spike and slow smooth wave of the electroencephalogram are predominantly seizures of childhood or puberty which tend to disappear as the person becomes adult. A more detailed chart illustrating this point graphically is presented in the article mentioned.[1]

The electroencephalographic classification of alternate spike and wave brings together a triad of seizures having diverse clinical manifestations. The first (petit mal) is a transient lapse of consciousness, the second (myoclonic epilepsy) a single quick contraction of muscles and the third (akinetic epilepsy) a sudden loss of postural control. In spite of this disparity in appearance, these three types of seizures have a number of characteristics in common: great frequency, brevity of attacks, abrupt onset and termination, maintenance of mentality, sensitivity to changes in the acid-base balance or in the concentration of oxygen or of sugar in the blood, a strong tendency to spontaneous recovery with age and, except in some akinetic cases, absence of evidence of cerebral pathologic change and, finally, resistance to ordinary anticonvulsant drug therapy but relief from a new preparation to be described presently. These three types of seizure may occur alone or together or perhaps in combination with grand mal or psychomotor seizures. Each will be described.

PETIT MAL (PYKNOEPILEPSY)

Definition of the petit mal form of seizure is important. Many, probably most, doctors define petit mal as a small or mild seizure of any sort. This conception is illogical and when used in drug therapy may lead to embarrassing failure. Disease classification is based on difference in kind and not on difference in degree—a mild case of typhoid is just that and not something with another name. Although the clinician who originally used the terms grand mal and petit mal may have thought only of size, we now know that the three main manifestations of epilepsy—convulsions (grand mal), periods of amnesia (psychomotor) and transient lapses of consciousness (petit mal)—are distinct also as regards drug therapy.[2] The term pyknoepilepsy is preferable to pyknolepsy because this form of seizure is not, like narcolepsy, something different from epilepsy. It is epilepsy in its purest form.

Petit mal, pyknoepilepsy or dart and dome dysrhythmia, whichever term is preferred, consists of a lapse of consciousness lasting from five to thirty seconds of time. The person is usually immobile, and muscular movements, if any, are confined to rhythmic jerking or twitching at the rate of three per second of the eyelids or brow and, rarely, of the head and arms. These temporary "blackouts" recur usually every day, from five to scores of times a day. There is no aura or after-symptom. Seizures begin and end abruptly. Rarely, however, the child may be in a state of confusion lasting for hours which the electroencephalograph proves is a petit mal status. If there is any rigidity of muscles, if the person does automatic purposeless things or if he mumbles, groans or makes chewing motions the attack is probably a short psychomotor seizure and not a petit mal. Involuntary muscle movements, if present, are clonic in petit mal and tonic in psychomotor seizures.

Petit mal seizures are more likely to occur in the minutes or hours after rising; they may be precipitated by emotion, excitement or in females by menstruation and are much less frequent during physical or mental activity. Girls are more often affected than boys. Mentality is not impaired even by scores of thousands of seizures. In fact, patients with pure petit mal seem

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1. Gibbs, Frederic A.; Gibbs, Erna L., and Lennox, W. G.: Electroencephalographic Classification of Epileptic Patients and Control Subjects, Arch. Neurol. & Psychiat. **50**: 111 (Aug.) 1943.

2. Gibbs, F. A.; Gibbs, Erna L., and Lennox, W. G.: Epilepsy: A Paroxysmal Cerebral Dysrhythmia, Brain **60**: 377 (Dec.) 1937; Cerebral Dysrhythmias of Epilepsy: Measures for Their Control, Arch. Neurol & Psychiat. **39**: 298 (Feb.) 1938; Influence of the Blood Sugar Level on the Wave and Spike Formation in Petit Mal Epilepsy, ibid. **41**: 1111 (June) 1939. Lennox.[12]

unusually bright. I have made intelligence tests routinely of private patients. In a group of 33 patients who had experienced an average of nearly 30,000 petit mal and 30 grand mal seizures the majority had Wechsler Bellevue scores of from 120 to 139, which classified them as intellectually superior or very superior.

If a child gives a history of daily petit mal, seizures can usually be precipitated for inspection by having

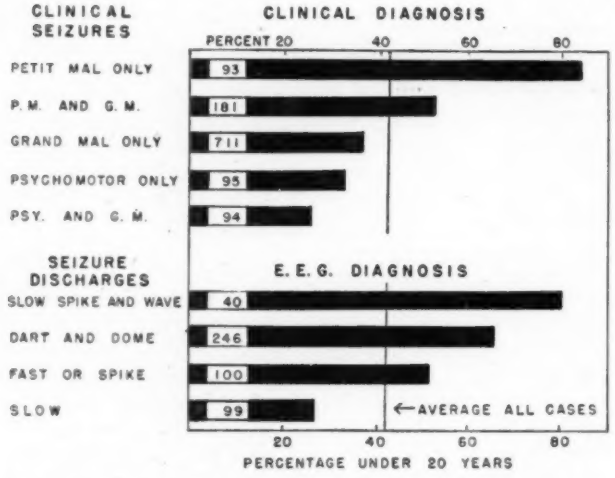

Fig. 1.—The proportion of various types of seizures and of electroencephalographic seizure discharges which occur in patients under 20 years of age. The figures at the base of the column refer to the number of patients in the group. The length of the columns corresponds with the percentage of each group who are under 20 years. Thus, of the 93 patients who had a history of having petit mal only, 84 per cent were less than 20. Percentage figures represented by the length of columns from the top down, are 84, 53, 37, 33, 26 and 80, 65, 52, 27. Data dealing with the clinical classification of seizures and with the electroencephalographic classification are taken from the same group of 1,260 epileptic patients, but only the electroencephalographic records containing seizure discharges are shown on the lower half of the chart.

him overventilate his lungs, which causes alkalosis and thereby increases instability of the cortical potentials. In 82 per cent of patients with a history of petit mal, the characteristic three per second alternate dart and dome formation, first described by Davis, Gibbs and Lennox,[3] is present on an electroencephalographic examination which includes a short period of hyperpnea[1] (fig. 2). Typical petit mal discharges may occur without coincident clinical symptoms, subjective or objective, but in such cases the subclinical seizure discharge is short, from one to four seconds long, or is discontinuous and may not appear simultaneously in all leads. This alternate dart and dome formation is sensitive to chemical changes in the blood passing through the brain. Discharges are made more numerous by alkalosis, hypoglycemia or hypoxemia and are suppressed by the opposite conditions.

MYOCLONIC EPILEPSY

Myoclonic shocks or jerks are single contractions of the flexor muscles, usually involving one or both arms but sometimes muscles of the trunk as well. There is no detectable loss of consciousness. These are similar to the muscular jerks which many healthy persons experience on falling asleep. Myoclonic jerks most often occur in patients subject to petit mal, although they may form the aura of grand mal. Occurrence in the absence of a history of some other form of seizure is extremely rare. Like petit mal, they are most frequent in the morning hours. Except for the embarrassment of a sudden unexplainable movement, the seizure is innocuous. Myoclonic epilepsy is not to be confused with the extremely serious myoclonus epilepsy. Much of the book by Muskens[4] is devoted to this subject.

If an electroencephalogram is made at the time of a myoclonic shock, a single dart and dome may appear coincidentally on the record (fig. 3). If it is absent the electrical discharge presumably is confined to subcortical areas of the brain or to the spinal cord.

AKINETIC EPILEPSY

Akinetic ("lack of motion") seizures were called "static" by Ramsey Hunt[5] and are rarely encountered in adults. They consist of a sudden loss of postural control, with nodding of the head or, if generalized, a sudden fall. Without any warning, and without coincident muscular jerk, the child collapses. Usually he gets up immediately but may lie limp and unconscious for several minutes. The momentary attacks, like petit mal, may occur dozens or even hundreds of times during the day. Except for the lack of an emotional excitant, the phenomenon resembles the cataplectic attacks which accompany narcolepsy.

Various circumstances make akinetic epilepsy more confusing and less hopeful than petit mal or myoclonic epilepsy. As in cataplexy, there may be a history of encephalitis, or there may have been birth injury or asphyxia also suggesting a midbrain lesion. The electroencephalogram made when the patient is without symptoms may contain a plethora of abnormalities; long runs of smooth, evenly spaced three per second waves without spikes, bursts of discontinuous or atypical three per second petit mal formations and two per second petit mal variant formations occurring singly or in series or as a focus of malactivity in one lead only, or there may be a mixture of these dysrhythmias appearing at intervals in a normal appearing record (fig. 4).

SIGNIFICANCE OF THE SPIKE AND WAVE PATTERN

The spike and wave is the only pattern appearing in a routine testing which is distinctive for epilepsy. However, there is a vast difference between the three per second dart and dome (petit mal) and the two

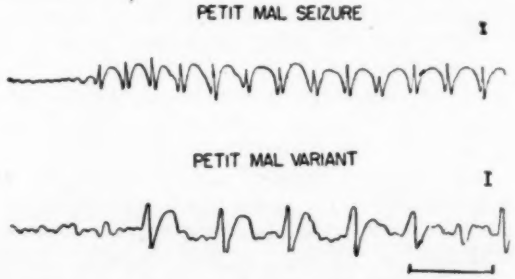

Fig. 2.—Samples of the petit mal and petit mal variant type of dysrhythmia. At the left of each tracing is the patient's normal rhythm. The upper tracing taken during a petit mal seizure is of very high voltage (the signal at the right marks 200 microvolts) and consists of an alternate dart and dome recurring two and one-half times per second. The lower tracing, taken when the patient appeared to be normal, contains a spike and wave recurring one and one-half times per second, and the signal at the right marks 50 microvolts. The horizontal line at the bottom measures one second.

per second blunt spike and wave (petit mal variant) formations (fig. 2). The petit mal type of discharge is most common in essential (genetic) epilepsy. The dysrhythmia usually appears simultaneously in all leads

3. Gibbs, F. A.; Davis, H., and Lennox, W. G.: The Electroencephalogram in Epilepsy and in Conditions of Impaired Consciousness, Arch. Neurol. & Psychiat. **34**: 1133 (Dec.) 1935.

4. Muskens, L. J. J.: Epilepsy: Comparative Pathogenesis, Symptoms, Treatment, New York, William Wood & Co., 1928.

5. Hunt, J. R.: On the Occurrence of Static Seizures in Epilepsy, J. Nerv. & Ment. Dis. **56**: 351 (Oct.) 1922.

and coincides accurately with any period of unconsciousness, and the spikes with any clonic movement. The appearance of the pattern possesses individuality for each patient. Petit mal discharges, no matter how numerous, carry a good prognosis for recovery and maintenance of mentality. They are easily affected by certain alterations in the chemistry of the circulatory blood.

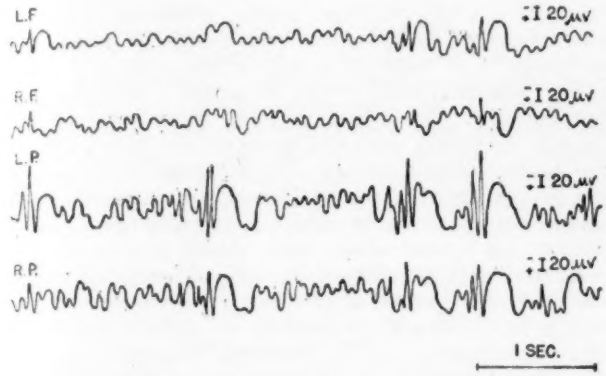

Fig. 3.—Sample of the electroencephalogram of a patient having frequent myoclonic shocks. The dart and dome formation and the muscular jerks were synchronous, although jerks were not always accompanied by disturbance of cortical potentials. In this patient the disturbance was maximal in the left parietal area. Intravenous injection of 0.5 Gm. of caffeine with sodium salicylate was followed by the disappearance of both jerks and dysrhythmia. The signal at the right marks 20 microvolts and the line at the bottom one second.

In contrast, the petit mal variant type of discharge, which occurs only one sixth as frequently, most often occurs in brain injured (symptomatic or acquired) epilepsy; it is often focal; accompanying symptoms may be absent or only a mild confusion. The prognosis, perhaps because of associated pathologic changes, is generally poor for both recovery and mentality and the discharges are little affected by changes in blood chemistry.

TREATMENT

The treatment of this triad of phenomena, in contrast with the grand mal or psychomotor seizures, has been notoriously ineffective. Fortunately the healing forces of nature usually bring spontaneous cure, at least of petit mal and myoclonic epilepsy, but this distant prospect is of no great comfort to parents who find the educational and social progress of children blocked by attacks which recur many times a day every day. Fortunately a new medicine, 3,5,5-trimethyloxazolidine-2,4-dione, promises relief to many of these patients.

The following therapeutic agents have been used for petit mal with varying, but usually disappointing, results:

Acidosis, however induced, tends to inhibit the three per second dart and dome dysrhythmia and the accompanying petit mal or myoclonic seizures. A relative acidosis is most easily and cheaply induced by activity of muscles and of the brain. Petit mal seizures are relatively frequent during periods when body and brain are idle.

Ketosis, produced by means of a ketogenic diet, has been of distinct benefit to a minority of patients with petit mal, though if attacks are frequent freedom may be short lived. The unpleasantness of the diet and the labor involved have interfered with its wider use. Why certain patients should be free of petit mal with ketosis and others in no way affected is unexplained.

Diphenylhydantoin (phenytoin) sodium, in contrast with the dramatic effect on psychomotor and grand mal convulsions, often increases the frequency of petit mal. The evidence in the literature is clouded because of the fact that many authors confuse brief psychomotor seizures with petit mal.

Phenobarbital is sometimes of temporary or partial assistance in control of petit mal, but in developed cases such control may last only a few days or weeks. A third of one group of patients was seizure free after phenobarbital narcosis maintained for ten days. However, subclinical seizure discharges remained.[6]

Mebaral (methyl ethyl phenobarbital) in my experience has been rather more effective than phenobarbital, but here again benefit is usually only partial or short lived.

Amphetamine (benzedrine), or Dexedrine sulfate, combined in most cases with phenobarbital, stopped the petit mal in 17 of a group of 33 uncomplicated cases.[7]

Glutamic acid has received more attention in popular than in medical journals. The one medical report details improvement in 6 patients whose regular therapy was supplemented by from 12 to 20 Gm. of glutamic acid.[8]

Caffeine used alone for petit mal has not, I believe, been previously reported. One of our adult patients with incapacitating frequency of myoclonic shocks ascertained for himself that he could secure relief only by drinking from five to ten cups of coffee daily. We corroborated this by observing that the frequent spike and wave discharges of the electroencephalogram disappeared during and after the intravenous injection of 0.5 Gm. of caffeine with sodium benzoate. Caffeine either in tablets or as coffee given to a number of patients with petit mal has somewhat ameliorated the frequency of attacks in about one half; others have not been helped or have experienced insomnia or increased nervousness, which precluded continued use. In 1 adult patient having from ten to one hundred petit mal seizures daily, not

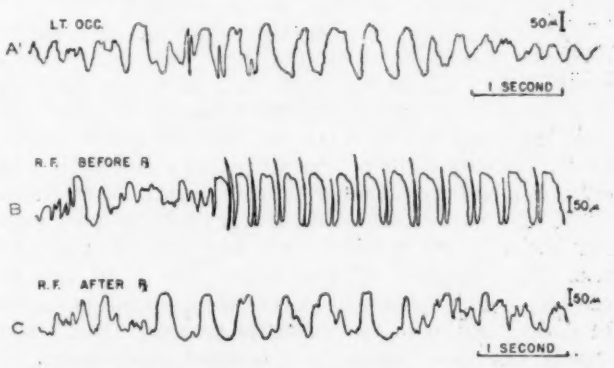

Fig. 4.—The uppermost tracing, *A*, is a sample of the electroencephalogram of patient L. B. Her very frequent myoclonic and akinetic seizures had been absent for several months on Tridione therapy, yet this peculiar seizure discharge, several dart and dome formations, preceded and followed by a short series of high voltage slow waves, recurred every ten to twenty seconds. The lower two tracings are of patient J. S. The upper tracing, *B*, taken before Tridione therapy was begun, is the beginning of a clinical petit mal seizure which occurred after fifteen deep breaths. The bottom tracing, *C*, taken three months after seizures ceased, showed only high voltage slow waves after ninety deep breaths.

influenced by ketosis or by any of the many drugs tried, caffeine was apparently influential in terminating attacks, absent now for nearly a year.

6. Cooder, H. R.: Personal communication to the author.
7. Livingston, S., and Kajdi, L.: Personal communication to the author.
8. Price, J. C.; Waelsch, H., and Putnam, T. J.: dl-Glutamic Acid Hydrochloride in Treatment of Petit Mal and Psychomotor Seizures, J. A. M. A. **122**: 1153 (Aug. 12) 1943.

Tridione, in my experience, has been the most dramatic in its effect of any form of therapy attempted. The drug is 3,5,5-trimethyloxazolidine-2,4-dione[9] and is not as yet on the market. The structural formula is as follows:

Everett and Richards found the compound more effective than diphenylhydantoin or phenobarbital in controlling convulsions induced in animals.[10] Richards and Perlstein[11] have used it in athetosis and in various forms of epilepsy. I have made a preliminary report of a group of patients with petit mal.[12] The medicine is dispensed in capsules each containing 0.32 Gm. (5 grains). Doses used varied from 1.0 to 2.0 Gm. (15 to 30 grains) a day without much regard for age.

During the past fifteen months I have given the drug to 120 patients, both children and adults. Attention has been concentrated on patients whose seizures were predominantly petit mal, myoclonic or akinetic. The fact that seizures in these patients occurred many times every day permits a quicker judgment of results than with other types of seizures which may recur at intervals of weeks or months.

RESULTS

A detailed record of results will be presented elsewhere, but observations to date justify a general statement together with a few case histories. Because of the fact that these three types of epilepsy often disappear spontaneously, results of treatment must be judged more critically than with other forms of seizures. However, there is nothing in the literature of epilepsy which would prepare one for an abrupt decrease or wiping out of these seizures in a period of days or weeks. Even more surprising, in view of our experience with other anticonvulsants, would be the failure of seizures to return promptly when the medicine is discontinued.

Fifty patients each having many daily seizures, either petit mal, myoclonic or akinetic, have been under treatment with Tridione for from two to fifteen months. In a group of 40 patients 10 had a history of grand mal also, but these had been few and were of minor importance. Twenty-eight of the 40 patients had petit mal only. Six had myoclonic or akinetic seizures in addition, and 6 had one or both of these types without petit mal. All but 4 of the patients were less than 20 years of age. The duration of the illness was from one to eighteen years. Seizures recurred from several to scores of times daily, with remissions of no more than a few days. The total number of seizures experienced by individuals ranged from approximately 200 to something like 200,000. Electroencephalograms of all patients contained spike and wave discharges. Practically all of the group had been given the usual anticonvulsant drugs without important benefit. The Tridione was substituted for whatever drugs were being used. In no case was the transfer accompanied by an increase of petit mal.

Of this group of 40 patients 11 (28 per cent) now are free from petit mal, myoclonic or akinetic seizures and 21 (52 per cent) have experienced a 75 per cent or greater reduction in the number of seizures from the previous level. Ten (20 per cent) were helped only moderately. None failed to experience some amelioration of seizures. Therapy was discontinued in 2 cases because of toxic symptoms and in 2 others as a trial of results. Three of these have had no return of symptoms in the two to four months which have lapsed. Remissions of such duration were entirely unexpected in the light of experience with grand mal or psychomotor seizures, which recur promptly if medication is not continued for many months after seizures have ceased. Evidently petit mal seizures have a hair trigger mechanism which can be blocked relatively easily if the proper agent is used. The maximum reduction in seizures in most cases occurred in from one to three weeks. In several cases there might remain a small residuum which continued in spite of increased dosage or which disappeared after two or three months.

A second group of 10 patients, in addition to frequent daily petit mal seizures, experienced frequent grand mal seizures. Results with this group were encouraging as regards disposal of petit mal but disappointing as regards grand mal. In each instance petit mal seizures ceased or were decidedly lessened. However, the dose of Tridione which proved effective against petit mal was without influence against grand mal. Indeed, some of these patients had an unwonted number of major seizures, due possibly to stopping other medication, and in none of this group was medication continued. Diphenylhydantoin sodium oftentimes increases the frequency of petit mal. Whether Tridione can profitably be combined with diphenylhydantoin or phenobarbital in the treatment of patients who, in addition to one of the petit mal triad are having frequent or persistent grand mal seizures, requires further experience. Certainly patients having petit mal, myoclonic or akinetic seizures as their major problem are the most likely to benefit from this new medicine. My observations do not warrant statement regarding the effect of Tridione on patients having grand mal or psychomotor seizures not complicated by petit mal. In addition to the 50 patients 13, because of side effects or an immediate increase of seizures, did not continue medication the required two months.

The following cases are representative of the results observed:

N. Y., a girl aged 17 years, with an intelligence quotient of 138, began to have petit mal seizures six and one-half years ago. They recurred frequently, often scores of times a day. Phenobarbital and diphenylhydantoin sodium were without effect; glutamic acid was of transient benefit; mebaral gave freedom for three weeks, and caffeine for a shorter period. Tridione was begun July 1, 1944. By the end of two months a petit mal seizure was observed only about once a week. After another four months the seizures had disappeared and have been absent for seven months, during the last four of which Tridione has not been used. Electroencephalograms before treatment always contained several larval petit mal discharges and a prolonged petit mal with overventilation. Six months after cessation of seizures there was only a high voltage slow wave discharge with hyperpnea.

L. B., a girl aged 3½ years, born after prolonged labor and version, progressed normally till 15 months, when she began to have several rhythmic jerks of the legs whenever she fell, or her eyelids would blink rhythmically at a loud noise. A month before she was seen she began to fall frequently without reason. On phenobarbital these symptoms were absent for three days and then came more frequently, until they recurred from

9. Made available by the pharmacology division of the Abbott Laboratories, North Chicago, Ill.

10. Everett, G. M., and Richards, R. K.: Comparative Anticonvulsive Action of 3,5,5-Trimethyloxazolidine-2,4-Dione (Tridione), Dilantin and Phenobarbital, J. Pharmacol. & Exper. Therap. **81**: 402 (Aug.) 1944.

11. Richards, R. K., and Perlstein, M. A.: Tridione: A New Experimental Drug for the Treatment of Convulsive and Related Disorders, Arch. Neurol. & Psychiat., to be published.

12. Lennox, W. G.: The Treatment of Epilepsy, M. Clin. North America, September 1945.

fifty to two hundred times a day. Twenty-four hours after Tridione was first given (1.0 Gm. a day) attacks ceased for two months. They then began to return. Medication was increased to 1.3 Gm. a day. In the four months which have intervened akinetic seizures have been absent, the mentality, which is retarded, has improved a bit and behavior is better. In spite of the clinical improvement the electrocardiogram continues to have frequent discharges of high voltage three per second waves with occasional spikes interspersed (uppermost tracing of figure 4).

J. S., a boy aged 11 years, with an intelligence quotient of 136, had falling episodes at 3 years and at 5 years began to have petit mal seizures with increasing frequency up to twenty to thirty a day. Enuresis occurred with some. During the past six months he had occasional days of being confused, when he was able to eat but not to converse, i. e. periods of petit mal status. There had been six grand mal seizures. Phenobarbital, mebaral, diphenylhydantoin sodium, amphetamine and caffeine had been used without more than transitory benefit. Tridione, starting with 1.0 Gm. daily, was increased to 2.0 Gm. Petit mal seizures had disappeared in two months and have been absent for eight months, the last six of these without medication. Before treatment electroencephalograms yielded symptomatic petit mal both spontaneous and after overventilation and also a shifting focus of single dart and dome discharges. Five months after cessation of attacks the record yielded no discharges (two lower tracings of figure 4).

G. W., a girl aged 9 years, with an intelligence quotient of 130, had ten to twenty petit mal seizures daily for eighteen months without interference from phenobarbital or mebaral. The electroencephalogram contained two eight second periods of petit mal discharges and many single high voltage three per second waves. Petit mal seizures ceased about ten days after medication was begun and did not reappear during a severe attack of measles. An electroencephalogram made after three months of freedom was essentially normal. Behavior also was much improved.

W. McN., a boy aged 10 years, had had petit mal seizures ten to thirty times daily, accompanied by coarse clonic movements of the arms for three and one-half years. Seizures were easily precipitated by overventilation. Phenobarbital, diphenylhydantoin sodium and glutamic acid were without effect. Petit mal seizures ceased several weeks after Tridione therapy was commenced, but five days later medicine was stopped because of vomiting. Seizures were entirely absent for four months, then returned with their former frequency but without the accompanying clonic movements. Medication was resumed, and attacks again ceased after several weeks.

G. W., a boy aged 12 years, with an intelligence quotient of 112, had occasional grand mal seizures, held in check by diphenylhydantoin sodium, and myoclonic jerks evidenced by a single sharp cry. These recurred several times a day and had not been helped by phenobarbital or diphenylhydantoin sodium. His electroencephalogram contained a few single wave and spike discharges. For three months after starting Tridione he did not have a single cry, but grand mal seizures returned and became more frequent in spite of phenobarbital medication. For this reason Tridione was stopped and diphenylhydantoin reinstituted.

These encouraging and dramatic results are only the immediate results of therapy. Time must tell the long term effects, either of therapeutic results or of side-effects. We hope for the disappearance not only of clinical symptoms but also of the underlying dysrhythmias. On this point observations to date are encouraging but inconclusive.

SIDE-EFFECTS

Unpleasant side-effects of Tridione therapy have been various. In several cases skin rashes caused discontinuance. Gastric disturbance has not been prominent, nor has drowsiness. A more difficult and surprising side-effect has been an unusual sensitivity of the eyes to bright daylight. This was noted by the majority of adolescent or adult patients but only rarely by young children, although children received much larger doses per pound of weight. The symptom has not been attended by any decrease in visual acuity when indoors or alteration in the appearance of the retina or other structures of the eye. Continued use of the medicine has not caused progressive increase of photophobia, which disappears a week or ten days after the medicine is stopped. This subject is being investigated. The possibility that therapy need not be continued indefinitely minimizes anxiety regarding unpleasant chronic side-effects.

What might be called pleasant side-effects have been improved appetite and gain in weight by some patients. In others the disappearance of clinical symptoms has been marked by an improvement in the school performance or in the deportment of the child.

COMMENT

Aside from the practical therapeutic effects of Tridione therapy, use of this drug throws light on certain underlying problems of neurophysiology. Traditionally, antiepileptic drugs have been looked for among the sedatives. Yet members of the petit mal triad respond best to caffeine, amphetamine sulfate and Tridione, none of which is a soporific. Because slow brain waves predominate in petit mal, the use of stimulating drugs which increase wave frequency is logical. The clinical antithesis to diphenylhydantoin sodium, which often increases petit mal, is striking.

Possibly the drug acts on the portion of the brain from which the spike and wave pattern arises. Penfield [13] demonstrated in 1 case that a petit mal discharge originated in the region of the infundibulum. Various bits of evidence suggest that the region of the midbrain may be important for maintenance of postural control and of consciousness. Without any doubt, Tridione is a most useful and interesting drug which will repay careful study.

CONCLUSIONS

Seizures with divergent clinical appearances, petit mal (pyknoepilepsy) and myoclonic and akinetic epilepsy have two important characteristics in common: first, the alternate spike and wave pattern of the electroencephalogram, and, second, lack of benefit from the usual anticonvulsants but positive benefit from the use of a medicine not yet on the market 3,5,5-trimethyloxazolidine-2,4-dione (Tridione).

This medicine was given to a group of 50 patients subject to frequent daily petit mal, myoclonic or akinetic seizures not helped by previous medication. In 40 of the patients grand mal seizures, if present, were of minor importance. In a period of days to weeks the offending minor seizure ceased in 28 per cent, were reduced to less than one fourth of the usual number in 52 per cent, and were little affected in 20 per cent. In several patients seizures once stopped did not return when medication was discontinued. In 10 other patients the daily petit mal seizures were of less importance than frequent grand mal. In these Tridione stopped or lessened petit mal but proved ineffective against the grand mal seizures or even increased them.

The principal side-effect was photophobia, which affected older children and adults more frequently than the young. These observations extend over a period of fifteen months. Final evaluation of therapeutic and side-effects must await a wider and longer experience.

300 Longwood Avenue.

13. Penfield, W., and Erickson, T.: Epilepsy and Cerebral Localization, Springfield, Ill., Charles C Thomas, Publisher, 1941.

ABSTRACT OF DISCUSSION

DR. ERNST WOLFF, San Francisco: Dr. Lennox's paper is of extreme interest to the practicing pediatrician for many reasons. It demonstrates in the most lucid manner the work of Dr. Lennox and his associates in establishing the differential diagnosis of seizures in childhood by means of characteristic patterns of the electroencephalogram. This fact alone restores our confidence in a method of examination which heretofore did not give us sufficiently reliable help in differential diagnosis, especially in the separation of functional from organic conditions in childhood. The therapeutic effect of Tridione in the series of cases presented is most impressive. Especially interesting is the fact that the drug needs only to be given temporarily to produce lasting effects in some cases, though this fact naturally must be definitely established by a follow-up period of longer duration. Children with seizures have great difficulty in attending schools regularly, even when under treatment with the best known drugs hitherto available. Should its effectiveness become permanently established, we may hope that Tridione will normalize the education of these unlucky patients. Since many such children have normal or high intelligence levels, good school opportunities can be a big factor in their happiness and emotional stability, not only for them, but for their families as well. A drug which will be effective against childhood seizures will drive away the clouds from many homes.

DR. M. G. PETERMAN, Milwaukee: The forms of epilepsy specified include the most baffling in this disease entity. A new drug is most welcome in the treatment of these symptoms. In my experience the akinetic form of epilepsy occurs mostly in infants and is highly resistant to all treatment. It is usually rapidly progressive and often fatal. I have seldom seen spontaneous recovery. All epilepsy must have a basic cerebral pathologic form because the electrogram consistently indicates an abnormality or dysrhythmia. Pyknolepsy or pyknoepilepsy was most completely described by Friedmann and by Heilbronner. With Lennox I am unable to make a differentiation of this form of attack from petit mal epilepsy. However, I cannot be as sanguine about the spontaneous recovery. I would agree with Penfield and Erickson, who stated that "spontaneous remissions do not occur in more than 2 or 3 per cent." However, later in their book they qualify this statement considerably. Many children with pettit mal attacks eventually develop grand mal seizures. I have also studied the intelligence quotient of my patients with petit mal. In 1927 I reported that these patients rated high in mental ability and were usually superior to their siblings. Eventually, however, mental deterioration does appear. Contrary to Lennox's experience, I find that fasting and subsequently a ketogenic diet, which maintain a constant hypoglycemia, rather promptly control the attacks in over one third of the patients. I have used Brain's hyperpnea test since it was described in 1924 and find that it will usually precipitate a petit mal seizure in the potential patient. It is very useful to produce the electrogram changes described by Lennox. The most effective treatment yet introduced for petit mal is the ketogenic diet. Some authors referred to the results with dilantin as a "miracle" and others stated that "petit mal attacks responded better to diphenylhydantoin than to other forms of treatment." Others report that "seizures were reduced in 59 to 84 per cent" of their patients. This is obviously not true, as Lennox states, but it has cruelly stimulated the hopes of the patient and his relatives. For many years and after an adequate trial of dilantin I have insisted that this drug and all others have no value in the treatment of petit mal. Recently even Lennox questioned whether "the patients or the author were resistant to dilantin sodium." I am pleased to read Lennox's conclusions regarding this drug. He has also effectively disposed of glutamic acid. The use of caffeine for the treatment of petit mal was reported among others by Karger in 1919. I found it to have no definite effect.

EARLY FILARIASIS IN YOUNG SOLDIERS

CLINICAL AND PATHOLOGIC ANALYSIS

MAJOR KENNETH J. THOMPSON
MEDICAL CORPS, ARMY OF THE UNITED STATES

MAJOR HAROLD RIFKIN
MEDICAL CORPS, ARMY OF THE UNITED STATES
AND
LIEUTENANT MEYER ZARROW
SANITARY CORPS, ARMY OF THE UNITED STATES

With the onset of war filariasis, known chiefly to tropical medical practitioners, became a disease to be recognized and managed by medical officers, and in the future by civilian physicians. The disease was formerly recognized by its elephantoid character in the late stages. With the onset of war, military and naval personnel residing in filarial endemic areas contracted the disease and developed new and hitherto unrecognized clinical manifestations. Sporadic reports of early filariasis have appeared of recent date in the literature. King and Wartman [1] discuss the clinical and pathologic manifestations of early filariasis in a group of soldiers residing in the Samoan Islands. Michael [2] describes a similar picture among naval and marine personnel, who have been evacuated to state-side naval hospitals. Zuckerman and Hibbard [3] have described changes occurring in the lymphatic tissues of patients infected in the South Pacific Islands. Rifkin and Thompson [4] describe their observations on structural changes occurring in lymph nodes and lymphatic vessel biopsies from a group of 30 soldiers who resided in filarial areas for an average period of one year. They further stress, with Michael [2] and Zuckerman,[3] the allergic nature of the disease during its early and acute phase. Pasternak [5] has described the clinical findings and the morphologic features in 2 cases of acute filarial epididymofuniculitis. Sapero,[6] describing epidemic diseases in the early phases of the war, stresses the importance of early recognition of filariasis. Manson-Bahr [7] and O'Connor and Hulse [8] have described the clinical and pathologic findings of filarial disease in natives. Their brilliant work, we feel, is however not directly associated with the type of disease we have seen in military personnel.

In the last two years an attempt has been made by us to delineate the underlying changes occurring in the early stages of the disease. A clinicopathologic concept of early filariasis has been developed as a result of prolonged clinical observation of the patients, correlation with the histologic findings from representative biopsies of lymph node and lymphatic vessels, and observations of a skin test utilizing titer dilutions of Dirofilaria immitis as an antigen. It is felt that this is important to the internist and general practitioner in his differ-

1. Wartman, W. B.: Lesions of the Lymphatic System in Early Filariasis, Am. J. Trop. Med. **24**: 299-313 (Sept.) 1944.
2. Michael, P.: Filariasis Among Navy and Marine Personnel: Report on Laboratory Investigations, U. S. Nav. M. Bull. **43**: 1059-1079 (May) 1944.
3. Zuckerman, S. S., and Hibbard, J. S.: Clinicopathological Study of Early Filariasis, with Lymph Node Biopsies, U. S. Nav. M. Bull. **44**: 27-36 (Jan.) 1945.
4. Rifkin, Harold, and Thompson, K. J.: Observations on the Structural Changes Occurring in Filariasis, Arch. Path., to be published.
5. Pasternak, J. G.: Filarial Epididymofuniculitis, Arch. Path. **35**: 414 (March) 1943.
6. Sapero, J. J., and Butler, F. A.: Highlights on Epidemic Diseases Occurring in Military Forces in the Early Phases of the War in the South Pacific, J. A. M. A. **127**: 502-506 (March 3) 1945.
7. Manson-Bahr, P. H.: Manson's Tropical Diseases, London, Cassell & Co., Ltd., 1942.
8. O'Connor, F. W., and Hulse, C. R.: Some Pathological Changes Associated with Wuchereria Bancrofti Infection, Tr. Roy. Soc. Trop. Med. & Hyg. **25**: 445-454 (May) 1932.

ential diagnosis of lymph node enlargements, to the urologist for his distinction of filarial epididymo-orchitis, to the general surgeon for his differential diagnosis of filarial lymphangitis and filarial abscesses and for his proper selection of node biopsies and finally to the pathologist for his recognition and appreciation of another endothelial granuloma.

In examining a group of 200 patients infected with filariasis, it became evident that there was no one symptom or sign that was constant in every case. All patients fell into one of the following general groups:

1. The first group comprises patients in whom the predominating finding is an acute lymphangitis involving the upper or lower extremities, sometimes both, either unilateral or bilateral. There may be a history here of one to several attacks.

2. The chief complaint in the second group is an acute funiculitis or epididymitis. The attacks here may be single or multiple. With repeated attacks the cord structure may be involved first on one side and then on the other. A bilateral involvement has been noted in an occasional case. In the main, the attacks usually confine themselves to one side.

3. The third group usually give a past history of an acute episode of lymphangitis or funiculitis one to eight months prior to hospital admission. On examination they usually have no complaints or clinical findings with the exception of a generalized lymph node enlargement.

4. In the fourth group the patients usually complain of an aching, tiring extremity, frequently associated with malaise, weakness and fever. There may or may not be history of an acute lymphangitis. Generalized lymph node enlargement is always present.

5. The fifth is a large group of patients who have had no clinical findings suggestive of the disease but who have resided in endemic areas and who give a positive skin reaction to Dirofilaria immitis antigen in dilutions varying from 1:4,000 to 1:16,000. On physical examination they present generalized lymphadenopathy.

6. In the sixth and final group the patients show intermittent swelling of the extremities. This is usually associated with a past history of an acute lymphangitis.

It is to be especially noted that all six groups have one finding in common, namely persistently enlarged and palpable lymph nodes. Those patients who have recently had lymphadenitis or funiculitis will usually show larger or softer feeling nodes. These are usually tender to palpation. As the disease progresses the nodes are likely to become smaller and have a firm and brawny feel to the palpating finger.

With such a varied clinical picture it was impossible to determine accurately whether a given patient had actually been infected with the disease or not. It was decided, therefore, to take complete and accurate clinical histories of each suspected patient. On these patients a careful laboratory work-up was performed. This included complete blood counts, study of peripheral smears for eosinophils, stool examinations, skin testing with a Dirofilaria immitis antigen in titer dilutions and, finally, biopsies of focal lymph nodes or lymphatic channels. As a result of correlation of biopsy studies and clinical findings, a concept and classification of the disease soon began to develop. At the present time we feel that there are three stages in early filariasis, namely the acute stage, the early subacute stage and the late subacute or early chronic stage of the disease. The typical morphologic findings in these phases of the disease have been described in full in a report by Rifkin and Thompson.[4]

A word about biopsies: All biopsies have been taken from superficial lymphatics or lymph nodes. In the cases of acute lymphangitis, a thickened lymphatic channel can usually be palpated. Section of this structure will usually show the characteristic morphologic findings. Where funiculitis is a primary feature, biopsy specimens should be secured from the pampiniform plexus. This means more than exposing the dartos muscle. The muscles must be dissected from the cord and the actual section taken from the plexus. This is performed under local anesthesia by isolation of a small segment of the plexus, ligating above and below and removing the intervening segment. If the case is one of acute filariasis, the plexus and the structures of the cord are edematous and thickened. The individual lymphatics stand out, giving the impression of a strand of vermicelli macaroni. In cases of funiculitis and epididymitis there will often be enlargement of the inguinal nodes, and particularly of the node over the fossa ovalis. During the course of an examination this node should always be palpated. Biopsy of an enlarged node from these areas will reveal typical microscopic pictures and frequently the actual parasite. In addition to the enlarged regional nodes, one not uncommonly finds enlarged parafocal bizarrely placed nodes. These, on biopsy, may show the microscopic picture of filariasis. From our experience the axillary nodes are more likely to show positive microscopic findings than the inguinal nodes. There is always a temptation to remove an inguinal node which is suspiciously enlarged because of its easier accessibility. The indiscriminate taking of biopsies will often lead to disappointment. In general, the node nearest the site of involvement should be taken. Further, if an acute lymphatic channel or a bizarrely placed lymph node can be palpated, these should be selected for biopsy. As has already been mentioned, the disease is believed to be systemic in nature. It is felt that the disease during its early acute manifestations is of an allergic nature, and as a result the lymphatic tissues throughout the body exhibit follicular hyperplasia associated with edema and eosinophilic infiltration of lymphatic channel walls and node structure. It is possible in this particular phase to remove a node or lymphatic vessel which is not the primary focus but which may still retain the characteristic findings of the acute allergic phase. It must be cautioned, however, that this occurs only during the acute or acute exacerbating phases of the disease.

Little is to be learned from incidence of primary involvement of the various lymph nodes. The nodes and structures selected for biopsies were 41 inguinal nodes, 9 axillary nodes, 18 epitrochlear nodes, 6 bizarre nodes, 11 pampiniform plexuses and 5 nodes over the fossa ovalis.

In 30 cases biopsies were taken from more than one lesion. Such combinations included right axillary and left inguinal nodes, left epitrochlear and right axillary nodes and sections from the right pampiniform plexus and left inguinal nodes.

As already stated, it appears that early filariasis may be divided into three phases, namely the early acute or allergic phase, the subacute phase, and the early chronic phase of the disease. There is no classification which can sharply delimit and define clinical medicine. In the main, however, it will be seen that patients infected with filariasis will fall into one of the categories to be described.

CLINICOPATHOLOGIC STAGE OF DISEASE

(*a*) *Acute Stage.*—This stage is commonly characterized by a sudden onset of lymphangitis with pain and swelling and enlargement of regional lymph nodes. The lymphangitis is usually fleeting in its duration, lasting in many instances three to four days and beginning to fade in twenty-four hours. The lymphangitis is peculiar in that it does not resemble the septic or bacterial variety. There is little fever, the temperature usually ranging from 99 to 100 F. Constitutional symptoms are rare. With the exception of slight malaise, no other symptoms are usually noted. A striking finding is the occurrence frequently of a centrifugal or retrograde lymphangitis. It will sometimes occur in the upper arm and work its way to the wrist. The general type of lymphatic infection extends in the direction of the lymph flow. Further, some patients may develop several attacks of lymphangitis recurring over a period of eight to nine months. Other cases may exhibit only an initial attack of lymphangitis and then progress into the subacute or late phase. In a number of cases there may be no history of an acute lymphangitis.

Not uncommonly in the acute stage of the disease one will encounter the enlarged bizarrely placed lymph nodes. There is no particular location for these lesions. They are not uncommonly found at the tip of the ileum, in the midarm and in the region of the teres and serratus muscles. This type of gland is not usually found in the true bacterial lymphangitis. In addition to these bizarrely placed lymph glands one can frequently palpate discrete lymphatic channels during the time when the lymphangitis is at its height.

There is a high incidence of funiculitis and epididymitis. Approximately one half of the patients complain of pain and swelling in the region of the cord or epididymis. The patients usually complain of pain and heaviness in the testicles of several days' duration, followed by enlargement. The enlargement may be minimal or the testicles may enlarge two to three times their average size. The condition is usually unilateral, although a second attack may involve the opposite side. For the most part, one side is usually selected. The funiculitis or epididymitis may subside quickly, within a matter of a few days, similar to that of the lymphangitis of the upper or lower extremity. Accompanying the enlargement of the cord there is commonly found a small hydrocele and frequently a brawny, edematous feel to the scrotum. The inguinal glands are slightly enlarged. There is no mistaking the typical feel of the structures of the cord. The cord itself sometimes becomes as large as the thumb, and the vas may be as thick as a lead pencil.

With the acute lymphangitis, whether it is in the arm, in the leg or in the structures of the cord, there is always associated a lymphadenitis. The lymphadenitis is not distinctive of the acute stage but is common to all stages of the disease. In addition to enlargement of the nodes, one will often find distantly placed enlarged lymph nodes. The one feature of these nodes, which may be considered characteristic of the acute phase of the disease, is that they are often larger and softer feeling than those of the later stages.

Not infrequently, try as hard as one may, one cannot obtain a history of acute lymphangitis or funiculitis. Yet on the removal of an involved node one may find the typical morphologic findings of the acute phase of the disease. The only explanation offered for this is that the patient may have built up an immunity to filariasis, or he may have been unobservant of his very early and sometimes minimal lymphangitis.

The laboratory findings are much the same: negative filarial blood smears, positive skin reactions in dilutions of 1:4,000 or higher, slight to moderate eosinophilia, white and red blood cell counts not remarkable. Knott[9] concentration smears have been run on all patients. We have been unable to demonstrate the microfilariae in the blood stream. The literature records 2 cases of positive blood smears in young soldiers infected with the disease.[10]

The pathologic findings of the lymph nodes in the acute stage are characterized by hyperplasia of the lymph follicles, eosinophilic infiltration throughout the node and edema. The cells are true eosinophilic leukocytes. The stain is constantly acidophilic. The nuclei are either bilobed or trilobed. The edema is denoted by the presence of a pink staining albuminoid fluid in the afferent and efferent lymphatics. It is interesting to note that in many cases the macrofilariae with their double contoured uterus are visible. In other nodes, worm segments or microfilariae are evident. The reaction is the same whether the worms are present or absent. Two theories are postulated regarding the absence of worm foci and a positive morphologic reaction. First, there is possibly disintegration of a previously existing worms or worm focus; second, the node is not the primary focus but one which shares in the general systemic reaction.

The morphologic findings in an acute filarial lymphangitis consist chiefly of thickening, edema and eosinophilic infiltration of the lymphatic wall. The lumen is occupied by an acute thrombus in which the eosinophils have become pyknotic and aggregated themselves into a necrotic amorphous mass. In some cases it is possible to note worms, worm segments or microfilariae. In the larger majority of cases, however, these are usually absent and the diagnosis is made chiefly on morphologic grounds. It has been possible to examine lymph nodes far removed from the actual source of infection which show the characteristic reaction. There is no evidence here of macrofilariae or microfilariae. Examination of superficial lymphatic tissues which do not appear to be clinically involved reveals moderate eosinophilic infiltration of their walls with a pink-stained edema fluid within the lumen. This we believe offers one bit of evidence toward a generalized systemic nature of the disease process.

(*b*) *Subacute Phase of Early Filariasis.*—In contrast to the acute lymphangitis, the patient will often complain of a heaviness, tiredness and aching of the involved part, and ofttimes there is little clinical evidence of the disease. Lymphangitis, swelling or edema is not noted. Occasionally there may be a history of mild recurrent attacks of edema, fleeting in nature, and often following heavy physical exertion.

Often the only objective findings are some small regional nodes, perhaps a bit more firm than usual. At times they may be almost shotty-like, while in the allergic phase the nodes will be definitely enlarged and succulent. At this time there are no bizarrely placed groups of glands nor are there any swollen, enlarged lymphatic channels. The glands would almost invariably be overlooked if it were not for the history of residing in filarial areas or a history of an acute episode.

9. Knott, J.: Method for Making Microfilarial Surveys on Dry Blood, Tr. Roy. Soc. Trop. Med. & Hyg. **33**: 191-196 (July) 1939.
10. Filariasis, Bull. U. S. Army M. Dept., February 1945, No. 85, p. 16.

This stage is represented histologically by a proliferative granulomatous reaction present within the lumen of the lymphatics, involving the wall of the lymphatics and the lymph node structure. Here one sees a macrophagic proliferation, with the formation of small epithelioid cell foci throughout the lymph cords and infiltrating the walls of the lymphatics and involving the periglandular connective tissue. It is possible in some cases to see persisting eosinophils associated with aggregates of macrophages. Actual epithelioid cell tuberculoid foci are noted, the center of which may be occupied by a degenerating macrofilaria, which in turn is surrounded by epithelioid cells embedded in concentric laminas of collagenous tissue. At the periphery, accumulations of lymphocytes and plasma cells are noted. In some nodes the worms have undergone complete necrosis and cannot be recognized. Here the central zone consists of a pink-red staining caseonecrotic material with radially arranged macrophages. This has an almost identical appearance to a true tubercle. We have classified these lesions as tuberculoid focal granulomas. The lumens of the lymphatics show partial to complete occlusion by a similar infiltrate of epithelioid cells and round cells. The endothelial lining may show a severe degree of irregular stratification, protruding in uneven fashion into the lumen as a cellular thrombus. The walls of these lymphatics are thickened by a similar macrophagic overgrowth. Concentrically arranged around the wall are usually noted accumulations of epithelioid cells with clear reticular cytoplasm, vesicular nuclei and light staining nuclear membranes. We subscribe to the terms of epithelioid cell endolymphangitis and perilymphangitis first utilized by Hartz.[11] It is of interest to note that the periphery of these tuberculoid granulomas may be occupied by accumulations of spindle shaped fibroblasts. This marks the end stage of the subacute phase of early filariasis or the beginning of the early chronic phase of the disease.

(*c*) *Late Stage of Early Filariasis.*—Finally there is the so-called "late stage," which is merely a progression of the previous two phases. We have seen 10 typical cases of this stage, and it might be termed the beginning of the chronic stage of the disease. However, we have no way of telling what the future progress of the patients will be. None have shown the microfilariae in the blood stream nor have they shown the infective type of lymphangitis belonging to the chronic elephantoid stage. The cases in this stage may go on to complete subsidence with disappearance of the symptoms.

The late stage of early filariasis occurs at a variable time following the onset of the early allergic phase. The only clinical manifestation is a chronic swelling with increase in size of an extremity, with or without pitting edema. Accompanying this there are complaints of tiredness and aching of the extremity.

It might well be argued that this late stage is really chronic filariasis and has no part in the discussion of the acute disease. We have observed it within twenty months after exposure; it has no distinct microscopic picture and clinically lacks many of the features of the chronic elephantoid stage of the disease as described in textbooks.

Histologically there is no distinct pattern, so that one cannot definitely denote the lesion as being a specific for filariasis. The predominant findings consist of a generalized reticuloendothelial hyperplasia with irregular areas of fibrosis. The lymphatics in the periglandular connective tissues, as well as the superficial lymphatics, show the replacement of a cellular infiltrate in the lumen and walls by a fibroblastic ingrowth. Here the lymphatic vessels may be reduced to a fibrous cord with its lumen hardly recognizable. Zuckerman aptly refers to such a lesion as an obliterative endolymphangitis.

11. Hartz, P. H.: Contributions to Histopathology of Filariasis, Am. J. Clin. Path. **14:** 34-43 (Jan.) 1944.

SKIN TESTS

We have utilized a Dirofilaria immitis antigen prepared according to the method of Dickson, Huntington and Eichold[12] with certain modifications. Complete details on the procedures and our results have already been published by Zarrow and Rifkin.[13] Briefly, the method of preparation is as follows: Dogs are killed by an intravenous injection of magnesium sulfate and their hearts removed. An incision is made into the right ventricle and auricle, and the adult worms are removed and placed in isotonic solution of sodium chloride. The worms are washed overnight in running water and treated with several changes of acetone. Following this they are thoroughly dried and a powder is then prepared. Extraction is then made as a 1 per cent suspension in isotonic solution of sodium chloride. This was sterilized by Seitz filtration with the addition of phenol. From a stock extract, dilutions of 1:200, 1:2,000, 1:4,000, 1:8,000 and 1:16,000 were made. Owing to the fact that the extracted material will lose its potency, the dried powder was maintained as a stock source and new dilutions were made every month. A volume of 0.05 cc. was injected on the volar surface of the arm. Dilutions of 1:2,000, 1:4,000, 1:8,000 and 1:16,000 were utilized. A control was injected, which consisted of a fragment of heart muscle which had been treated identically as the antigen. Readings are taken after thirty minutes and twenty-four hours. A positive reaction is considered as a definite increase in wheal size over the control plus an erythema measuring 2 cm. in diameter after thirty minutes.

In an attempt to determine the specificity of the Dirofilaria antigen in the skin test, it was possible to compare results of lymph node biopsy with results of skin tests. In a control group of 53 patients suspected of clinical filariasis, 60 per cent were proved to have this disease on biopsy. In this same group 73 per cent gave a positive reaction to a titer of 1:4,000 or higher. In 3 cases a positive biopsy was obtained with a negative skin test. The desensitization has been noted previously by Dickson and his associates[12] and appears to be a true factor and not due to loss of extract potency. In a separate series of 91 patients with clinical symptoms of filariasis, 94 per cent gave a positive response to a dilution of 1:4,000 or above. Biopsies were not performed on this group.

It has been claimed that patients with intestinal helminthiasis are sensitive to intradermal injections of Dirofilaria immitis antigen. A series of 65 patients, all free of clinical filariasis, were injected with the antigen. These patients harbored hookworm, Strongyloides stercoralis, Ascaris lumbricoides, Enterobius vermicularis and Hymenolepis nana. With one exception no positive reaction was obtained with a dilution of 1:2,000 or higher. This patient had clinical herpes

12. Dickson, J. G.; Huntington, R. W., Jr., and Eichold, S.: Filariasis in Defense Force, Samoan Group, U. S. Nav. M. Bull. **41:** 1240-1251 (Sept.) 1943.

13. Zarrow, M., and Rifkin, Harold: Observations on the Specificity and Clinical Use of Dirofilaria Immitis Antigen in the Diagnosis of Human Filariasis, Am. J. M. Sc., to be published.

zoster. It is felt, therefore, that a titer of 1:4,000 or higher of a nonspecific Dirofilaria immitis antigen is diagnostic of filarial infection in human beings.

LABORATORY DATA

Complete blood counts were performed on all patients. The red blood cell counts and hemoglobins were within normal limits. Neutrophils, monocytes and lymphocytes showed no aberration. Seventy-five per cent of the patients gave a white blood cell count between 7,500 and 8,500. Twenty-five per cent gave an elevation to 10,000. Of the entire group 34 per cent showed an eosinophilia. This never went higher than 28 per cent. The average was maintained from 10 to 15 per cent. In the latter group intestinal helminths were found in 15 per cent.

CASE HISTORIES

CASE 1.—*An acute filarial reaction in an involved lymphatic.* A white soldier aged 22 entered the hospital eighteen months after his first possible exposure to filariasis. The history revealed that ten months after arrival in an endemic filarial area the patient developed an epididymitis and funiculitis on the right side. The right testicle became swollen to twice normal size, and the right cord was likewise enlarged and tender. The acute symptoms subsided in fifteen days. However, since the original onset the right cord structures had remained slightly larger than the left, and the patient had complained of a mild pain in the right testicle. Four days before entry to the hospital the right cord again became tender and swollen. Examination showed the right cord structures to be three times normal size. The vas could be palpated as pencil in size; the epididymis was large, boggy and tender. The left cord and epididymis were normal. A moderately enlarged right inguinal gland was palpable. The right axillary glands were enlarged, nontender and freely movable. Laboratory examination revealed the skin test positive in 1:4,000, stool normal, Knott concentration tests negative for microfilariae, white blood cells 8,600, esoinophils 8 per cent. A section of the right pampiniform plexus was removed for biopsy.

Microscopic examination revealed lymphatics the lumen of which was filled with a cellular thrombus consisting of eosinophilic leukocytes, epithelioid cells, broken-down red blood cells and cellular débris. The wall was intensely hyperplastic and was infiltrated with large numbers of mature eosinophilic leukocytes, epithelioid cells and young spindle shaped fibroblasts. An interesting feature was the presence of a small pyknotic, eosinophilic tuberculoid focus at the periphery of the cellular hyperplastic wall. A section of this tubercle consisted of necrotic pink-staining débris surrounded by aggregates of eosinophils and epithelioid cells. Giant cells were not visible. There was 1 lymphatic present, in which there was a small cellular focus consisting of fibroblasts, lymphocytes, plasma cells and epithelioid cells covered partially by a thin endothelial membrane. This projected into the lumen as a true endolymphangitic thrombus. The periphery of the wall was infiltrated with a similar type of cells.

CASE 2.—*A proliferative granulomatous reaction, subacute phase.* A soldier aged 23 with thirty-one months of overseas duty entered the hospital complaining of enlargement of the right arm and forearm of three days' duration. The history revealed that the patient had spent twenty months in a filarial area. During this time there had been several minor attacks of pain and swelling in the right arm, though there was no definite history of lymphangitis. The right epitrochlear gland was not palpable. The axillary glands were enlarged, moderately firm and freely movable. There was no other glandular enlargement. The epididymis and cord, right and left, were normal. Laboratory examination revealed Knott concentration smears negative for microfilariae, white blood cells 8,200, eosinophils 10 per cent, and stool normal. A left axillary gland was removed for biopsy.

Microscopic examination revealed extensive hyperplastic reaction of the lymph follicles. The germinal centers shared most prominently in this reaction. They were filled with lymphocytes, plasma cells, mononuclear histiocytes and small numbers of epithelioid cells. Present in the cortical sinuses were small numbers of epithelioid cells having a clear reticular cytoplasm containing vesicular or bandlike nuclei with a distinct nuclear membrane. Within a small number of germinal centers were multinucleated giant cells. Present in one area were four caseating tuberculoid foci. These tubercles consisted of a central amorphous caseating mass, which was surrounded by palisades of epithelioid cells. Between and surrounding these epithelioid cells were large numbers of lymphocytes, plasma cells and small numbers of Langhans giant cells. The afferent lymphatics and intermediate sinuses gave a typical epithelioid endolymphatic and perilymphatic granulomatous reaction. Careful search through the entire node revealed no evidence of macrofilariae or microfilariae.

CASE 3.—*The subacute phase with an acute exacerbation.* A soldier aged 23 had spent twenty-eight months overseas, twenty-three months of which had been spent in areas endemic for filariasis. The patient gave no history of having had any subjective or clinical findings compatible with filariasis until two weeks prior to entry into the hospital. At this time he complained of pain and swelling in the left arm. Examination showed a linear area of redness and swelling in the midportion, volar aspect of the left arm and measuring 5 to 8 cm. There was an enlarged, tender lymph gland in this area. There were a few small, palpable left axillary glands. There was no other glandular enlargement. The laboratory investigation revealed the skin test positive in a dilution of 1:2,000 (no higher dilution was used in this case). Stools were normal, Knott concentration tests negative for microfilariae, white blood cells 7,600, eosinophils 4 per cent. The bizarrely placed gland on the medial aspect of the left arm was removed for biopsy.

Microscopically the most striking change was the presence of small accumulations of epithelioid cells throughout the lymph node. These were found in the cortical follicles including the germinal centers and also in the intermediate sinuses. These cells were irregular in shape, with oval nuclei and distinct nucleoli. Accompanying these epithelioid cells were characteristic foreign body giant cells lying among the epithelioid cells. Small foci of eosinophilic leukocytes were irregularly scattered throughout. A characteristic reaction was found in the sinuses and in the afferent and efferent lymphatics. This was actually a granulomatous endolymphangitis and perilymphangitis. Within the lymphatics and almost completely occluding them were collections of epithelioid cells, lymphocytes and histiocytes, which bore no relationship to the wall of the vessel. These loose connections of cells were occasionally accompanied by foreign body giant cells. In a number of lymphatics, thin strands of pink-staining connective tissue fibers could be observed ramifying in this cellular infiltrate. In one or two afferent vessels, living macrofilariae were observed containing an outer pink-staining cuticle and an inner pink-staining double contoured uterus; within this uterus were deeply basophilic round bodies, which apparently represented primary larval forms. The lymphatics here showed a distinct granulomatous perilymphangitis. These consisted of accumulations of histiocytes, epithelioid cells, lymphocytes and small numbers of eosinophilic leukocytes surrounding these involved lymphatics. The walls of the lymphatics were indented into the lumen and exhibited a piling up of the endothelium. In the surrounding connective tissue small pseudotubercles were visible consisting of a central core of epithelioid cells and an occasional eosinophil; these in turn were surrounded by perifocal early fibrosis. There were one or two areas which contained a distinct pyknotic necrotic central zone in which fragmented microfilariae were visible. These were surrounded by layers of epithelioid cells, eosinophils, lymphocytes and plasma cells. There was one medullary sinus containing a necrotic adult worm which was surrounded by a focal layer of hyalinized fibrotic tissue. In a number of the sections the lymphatics were dilated and filled with thin albuminoid pink-staining material. The endothelial lining here presented scalloping with moderate stratification.

CASE 4.—*Primary genital involvement with acute allergic systemic reaction.* A soldier aged 21 with a fifteen month overseas tour of duty entered the hospital complaining of pain and swelling of the right testicle of three days' duration. The history revealed that the patient had resided in a filarial endemic area for nine months, at the end of which time he developed pain and swelling of the right cord and epididymis with right inguinal node enlargement. The symptoms subsided in two days. The patient was evacuated to a nonendemic area and remained free from symptoms for nine months. The present attack of pain and swelling of the right cord began three days before entry to the hospital. Examination showed the right cord structures to be enlarged one to two times normal size, the vas being definitely increased in size. The right epididymis was enlarged to twice normal size and the sulcus obliterated. There was a firm mass felt in the right pampiniform plexus just above the epididymis. There was also an enlarged, tender right inguinal gland. The epitrochlear nodes were not palpable. However, the right axillary nodes were enlarged. Laboratory examination revealed the skin test positive in a dilution of 1:16,000, the stools positive for Endameba coli, Knott concentration smears negative for microfilariae, white blood cells 9,200, eosinophils 4 per cent. A specimen for biopsy was taken from the right pampiniform plexus, and the right inguinal gland was also removed.

Microscopic examination of the lymph node revealed an intense hyperplasia of the lymphoid follicles. The germinal centers were enlarged two to three times their normal size. They contained early and mature lymphocytes and plasma cells. The peripheral sinuses were crowded with mature lymphocytes, plasma cells and numerous eosinophilic leukocytes. Ramifying throughout the periglandular connective tissue, trabeculae, lymph sinuses and lymph cords were numerous mature eosinophils. The lymphatics, predominantly the afferent channels, contained a thin pink-staining albuminoid fluid material. There was no evidence of worm foci present. Microfilariae were not visible. A granulomatous reaction was not present. There was no indication at this stage of an epithelioid endolymphangitis or perilymphangitis.

Microscopic examination of sections of the pampiniform plexus revealed large aggregates of eosinophilic leukocytes strewn throughout the areolar connective tissue. These eosinophils were associated with small collections of lymphocytes, plasma cells and an occasional epithelioid cell and were seen infiltrating the media and adventitia of the small venules and walls of the lymphatics. In a number of areas these eosinophils had aggregated together and become pyknotic, and surrounding this necrotic central focus were tiny collections of epithelioid cells exhibiting a clear reticular cytoplasm. There was no evidence of giant cells or caseation. Worm foci were visible.

SUMMARY

A clinic-pathologic concept of early filariasis has been developed as a result of prolonged clinical observation of young soldiers residing in endemic areas, correlation with biopsy studies and the utilization of a skin test employing Dirofilaria immitis as an antigen in titer dilution.

It is believed that the disease, as manifested in this group, can be subdivided into three phases, namely acute, subacute and early chronic stage.

The acute and subacute phases have distinct clinical pictures and typical morphologic findings. The chronic stage is clinically silent and histologically is characterized predominantly by fibrosis.

Direct smears and Knott concentration methods have persistently failed to reveal microfilariae in the blood stream.

Evidence was obtained to support the systemic and constitutional nature of the disease during its early stages.

LARGE SCALE TESTING FOR Rh NEGATIVE BLOOD

MAJOR LESLIE H. TISDALL
AND
CAPTAIN DONALD M. GARLAND
MEDICAL CORPS, ARMY OF THE UNITED STATES
WITH THE TECHNICAL ASSISTANCE OF EVAN L. DURHAM
NEW YORK

The role played by the Rh factor in the etiology of transfusion reactions has been well known since the work of Wiener and Peters [1] and of Levine and his co-workers.[2] These reactions may be divided into two groups. The first and most common is that occurring in Rh negative pregnant or postpartum women because of the presence in their blood of anti-Rh agglutinins due to isoimmunization by Rh positive fetal blood. The second group is that occurring in Rh negative individuals who have been the recipients of one or more transfusions of Rh positive blood, as a result of which anti-Rh agglutinins have been formed in their blood. In both groups therefore the reactions are caused by the transfusion of Rh positive blood into recipients whose blood contains anti-Rh agglutinins.

TABLE 1.—*Rh Tests on Random White Population*

	Male	Female	Total
Number of tests	12,866	9,267	22,133
Number of Rh negative bloods	1,853 (14.4%)	1,290 (14%)	3,143 (14.2%)

TABLE 2.—*Rh Tests on Random Colored Population*

	Male	Female	Total
Number of tests	125	158	283
Number of Rh negative bloods	13 (10.4%)	15 (9.5%)	28 (9.89%)

The Army Whole Blood Procurement Service is particularly interested in this problem. The function of this service is to supply whole blood to the overseas theaters of war. Every effort is made to have this blood supply as safe and effective as possible. Obviously, the proper management of the severely wounded demands multiple transfusion of whole blood. As many as thirty transfusions to 1 casualty in a relatively short time is not uncommon. Since about 14 per cent of the random white population is Rh negative, it follows that many of these recipients of multiple transfusion may have reactions. With this in mind a project was established of shipping quantities of Rh negative blood as part of the regular blood supply.

In order to obtain Rh negative blood in quantity, it was necessary to utilize an easy and swift method of Rh determination. The complete Rh typing of a blood using anti-Rh_0, anti-Rh′ and anti-Rh″ serums is unnecessary for practical use. The use of the combined serums anti-Rh_0′ containing the two agglutinins anti-Rh_0 and anti-Rh′ will react with 87 per cent of cells from the random white population and will miss only 0.5 per cent of Rh positive cells, namely the Rh″ phenotype. Through the courtesy of Dr. Louis Diamond

From the Army Whole Blood Procurement Service, 2 East 37th Street, New York 16.

1. Wiener, A. S., and Peters, H. R.: Hemolytic Reactions Following Transfusions of Blood of the Homologous Group, Ann. Int. Med. **13**: 2306 (June) 1940.

2. Levine, Philip; Katzin, E. M., and Burnham, Lyman: Isoimmunization in Pregnancy: Its Possible Bearing on the Etiology of Erythroblastosis Fetalis, J. A. M. A. **116**: 825 (March 1) 1941.

of the Boston Blood Grouping Laboratory, we were supplied with anti-Rh_0' serum. This is a potent human antiserum with an agglutinin titer of well over 1 to 1,000 and with a high avidity index. All positive cells show agglutination in two minutes at the maximum.

TECHNIC

Each bottle of blood is brought to the laboratory with a sample of undiluted blood accompanying it. The undiluted cell suspension, remaining after the serum in the sample tube has been aspirated, is used for the test. The actual testing is done on a plate glass slide 8 by 7 inches ruled off into 1 inch squares. This permits fifty tests to be run simultaneously, together with necessary controls. One drop of anti-Rh_0' serum is placed on each square, using the dropper supplied with the bottle. One drop of the undiluted cell suspension is added with a separate medicine dropper for each test. The resulting suspension is then thoroughly mixed by using the bottom of a Kahn tube, which is wiped dry after each use. Controls with known negative and positive cells are set up. The cell mixtures are allowed to remain on the flat surface for one minute, and then the slide is rotated gently from side to side to loosen any cells adherent to the plate glass. When the positive control shows complete agglutination—usually within a minute—the tests are immediately read macroscopically. Cells over 24 hours old should not be used. The antiserum, which is kept in a refrigerator, should be at room temperature when used for testing. The actual setting up and reading of fifty such tests takes about fifteen minutes.

In order to check the accuracy of this technic a parallel test was run with the test tube method. A human anti-Rh_0 serum prepared by Capt. John Elliot, Sn. C., of the Department of Surgical Physiology, Army Medical School, Washington, D. C. was used with the following technic:

Three cc. of isotonic solution of sodium chloride is added to the blood clot remaining in the original pilot tube. The added saline solution is drawn up and expelled a few times by a medicine dropper. A separate medicine dropper is used for each tube. This results in an approximately 2 per cent cell suspension. One drop of the 2 per cent cell suspension and one drop of the anti-Rh_0 serum is placed in a Kahn tube. The tube is well shaken and placed in a water bath at 37 C. for one hour. The tubes are then centrifuged at 1,000 revolutions per minute for one and one-half minutes and immediately read for macroscopic agglutination. If none is visible, a drop is examined on a slide, microscopically. The presence of agglutination designates the blood as Rh positive; its absence denotes an Rh negative blood. Known positive and known negative controls are also run with this technic.

There was 98 per cent agreement of the results by the test tube and the slide method. The difference is explained by the fact that one serum is of the 85 per cent type while the other is of the 87 per cent. For complete accuracy, only those bloods were recorded as Rh negative which were negative to both tests. This means, in effect, that the recorded negative bloods were the results of testing with Rh_0 antiserum. The finding of 14.2 per cent Rh negative blood in 22,133 tests is in accordance with previously recorded figures.[3] It was interesting to note the almost perfect agreement of the percentage of Rh negative males and females.

In compiling these figures there were noted 283 Negro bloods, which were separately recorded. The percentage of Rh negative bloods was consistent with the results of other investigators.[4]

In the course of these investigations several anti-Rh serums of the animal type were used. In our hands these serums were not sufficiently accurate for routine use either by the slide or by the test tube technic. Several human anti-Rh serums were also tested and it was found that only those of a high agglutinin titer, at least 1:1,000, and a high avidity index were acceptable for the slide test. Weaker human anti-Rh serums are satisfactory for the tube technic. Dried human anti-Rh serums also have been found to be quite accurate.

COMMENT

The present day knowledge of the importance of the Rh factor to the clinician, particularly the obstetrician, the pediatrician and the transfusionist, makes imperative the determination of its presence or absence in a large number of persons. Certainly no premarital, antepartum or pretransfusion examination is complete without an Rh testing. Using a high titered human antiserum with a high avidity index, the slide technic has been most satisfactory for large scale Rh testing. The ease with which Rh testing can be performed on a large scale should place it in the category of a routine test.

3. Levine, Philip: Tables of Tests Made with Human Anti-Rh Sera, in Karsner, H. T., and Hooker, S. B.: The 1941 Year Book of Pathology and Immunology Chicago, Year Book Publishers, Inc., 1941, p. 508.

4. Wiener, A. S.; Belkin, R. B., and Sonn, E. B.: Distribution of A1-A2-B-O, M-N and Rh Blood Factors Among Negroes in New York City, Am. J. Phys. Anthropol. **2**: 187 (June) 1944.

PHTHALYLSULFATHIAZOLE

("SULFATHALIDINE")

CLINICAL, CHEMICAL AND BACTERIOLOGIC EVALUATIONS IN INFECTIOUS DISEASES OF THE COLON

MICHAEL H. STREICHER, M.D.
Assistant Professor of Medicine, University of Illinois College of Medicine
CHICAGO

While good results have been obtained with sulfonamides previously utilized in the intestinal canal, one is constantly on the alert for an agent that may approximate perfection. In recent years sulfaguanidine and succinylsulfathiazole (sulfasuxidine)[1] have been the two agents most widely used in the management of infectious diseases of the colon. Favorable results were obtained in a large percentage of patients treated with the two sulfonamides just mentioned.

In the evaluation of sulfaguanidine it is my experience that this agent is more toxic than succinylsulfathiazole, that larger dosages are required for optimum results and that the blood concentration determinations reach a higher level. Succinylsulfathiazole, on the other hand, is apparently less toxic and, while large doses have been prescribed orally, the blood levels range between 1 and 1.5 mg. per hundred cubic centimeters of blood irrespective of the duration of administration of the drug, thus indicating that the absorption of the drug from the gastrointestinal tract is negligible.

Recently a new sulfonamide has been developed named phthalylsulfathiazole, or sulfathalidine. This compound is similar to succinylsulfathiazole chemically

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Miss Catherine Grenci, research assistant, Dr. Robert W. Keeton, head of the Department of Medicine, and Dr. Milan Novak, head of the Department of Bacteriology, made helpful suggestions in this study.

1. Streicher, M. H.: M. Clin. North America **27**: 189, 1943.

and therapeutically but is more effective. Ross and Poth [2] have reported that phthalylsulfathiazole is absorbed sparingly from the gastrointestinal tract, that it maintains low concentrations in the blood (0.1 mg. to 1.5 mg.) and that it is rapidly excreted in the urine; they claim that the new drug has two to four times

TABLE 1.—*Efficacy of Phthalylsulfathiazole in Infectious Diseases of the Colon*

Name of Disease	Stage of Disease: Acute	Stage of Disease: Chronic	Results: Good	Results: Fair	Results: Poor
Chronic ulcerative colitis	22	58	20 acute 54 chronic	1 acute 1 chronic	1 acute 3 chronic
Amebic colitis	4	2	.....	.....	4 acute 2 chronic
Bacillary dysentery	..	2	.....	2 chronic	
Giardia lamblia	2	6	2 acute 6 chronic		
Paratyphoid	..	2	.....	2 chronic	
Dientameba fragilis	2	..	2 acute		
Total number of patients	30	70	24 acute 60 chronic	1 acute 5 chronic	5 acute 5 chronic

the bacteriostatic activity of succinylsulfathiazole and that it causes no toxic symptoms in man. Because phthalylsulfathiazole exerted a more bacteriostatic effect on the intestinal flora and because smaller doses were required to produce this effect, the new sulfonamide was placed on clinical trial.

This presentation is intended to give the general practitioner an analysis of the new sulfonamide in its application to infectious diseases of the colon. The study entails a careful evaluation of phthalylsulfathiazole in the treatment of 100 patients with infectious and ulcerative lesions of the colon. Chemical concentrations of the drug were determined in the stool and correlated with blood levels and bacteriologic studies.

RESULTS

Clinical Studies.—Of the 100 patients treated, 72 were female and 28 were male; of these 80 had chronic ulcerative colitis, 6 had amebic dysentery, 2 with bacillary dysentery, 8 with Giardia lamblia, 2 with paratyphoid and 2 with Dientameba fragilis. In table 1, the efficacy of phthalylsulfathiazole is shown. It is important to note that in chronic ulcerative colitis the patients in the acute stage of the disease show improvement comparable to the ones in the chronic group. In amebic colitis our results demonstrate again that sulfonamides have not been efficacious.

The results demonstrated in Giardia lamblia and in Dientameba fragilis, while favorable, are new in our experience and should be rechecked on a larger group of patients.

Clinically definite improvement is noted in the overall picture in infectious disease of the colon under phthalylsulfathiazole therapy. Of the 100 patients under study, 84 demonstrated good results, 6 show fair results and 10 patients show poor reaction to treatment. In chronic ulcerative colitis cramping in the abdomen subsides within seventy-two hours, the evacuations are reduced in number, the stools show a tendency to become formed and odorless, and the blood in the stool disappears in a few days after intake of the new drug. The patient feels better, eats better and gains weight. The acute fulminating types respond well in that the temperature is reduced considerably in seventy-two hours, the evacuations become less frequent and the tenesmus subsides. Phthalylsulfathiazole has been administered to many of our patients over two, four, six and eight week periods intermittently without demonstrating any toxic manifestations. Some patients were permitted to remain on a specific dosage for six to nine months without interruption to prove lack of toxicity. The matter of dosage will be discussed subsequently. In general, the patients on this therapy do very well and are in condition to do their work. In addition to the administration of phthalylsulfathiazole the patients under our care receive supportive measures and a controlled diet, so that the standards for study are parallel.

Therapeutic Dosage.—The dosage of phthalylsulfathiazole originally advised was 0.125 Gm. per kilogram of body weight daily (approximately one half that of succinylsulfathiazole. Thus, a patient weighing 150 pounds (68 Kg.) would receive 8.5 Gm. (seventeen tablets) of phthalylsulfathiazole daily. This dosage, in our experience, proved to be detrimental, unnecessary and wasteful, and after chemical studies were made on the blood and stools a dosage of 3 Gm. daily was decided on. On 12 Gm. daily intake the majority of our patients experienced severe cramping, more looseness in the stools and an increase in the number of evacuations.

CHEMICAL STUDIES

Blood Concentration Level.—The blood level studies show that the concentration of the drug in the blood stream ranges from 0.5 to 1.5 mg. per hundred cubic centimeters of blood irrespective of the dose intake. On a small dose it necessarily takes a few days longer before the upper blood levels are approached.

Stool Concentration Level.—Stool concentration tests were made in order to account for the recovery of the drug taken orally. Determinations were made of the amount of the total phthalylsulfathiazole in the entire stool for each day. Results show that about 55 to 65 per cent of the amount of the drug taken orally is recovered in the stool on a dosage of 3 Gm. (table 2).

Urine Concentration Level.—The amount of phthalylsulfathiazole excreted in the urine is equal approximately to 5 per cent of the amount of oral intake. The estimate of drug recovery on the daily oral intake of

TABLE 2.—*Recovery of Phthalylsulfathiazole in Milligrams for Seven Day Period, Patient 1*

	1	2	3	4	5	6	7	Per Cent of Recovery
Daily Intake 3 Gm.								
Urine	150	150	150	150	150	150	150	
Stool	138	298	2,515	2,021	3,391	1,853	3,312	64.9
Blood	57	57	81	81	45	45	45	
Total	345	505	2,746	2,252	3,586	2,048	3,507	
Daily Intake 12 Gm.								
Urine	600	600	600	600	600	600	600	
Stool	1,717	1,012	4,840	5,964	5,898	8,216	7,540	41.9
Blood	57	81	45	57	45	45	81	
Total	2,374	1,693	5,485	6,621	6,543	8,861	8,221	

3 Gm. would be 150 mg. and on 12 Gm. intake 600 mg. In tables 2 and 3 is shown an example of a recovery experiment demonstrating the amount of total phthalylsulfathiazole recovered in the urine, stool and the blood stream of 2 patients receiving 3 Gm. and 12 Gm. daily for seven days.

It is interesting to point out that the amount of total drug recovered seldom approaches the amount of oral intake, indicating that a substantial percentage of the drug intake is not recoverable; this may be due to lack of more accurate methods of estimating the

2. Poth, E. J., and Ross, C. A.: Federation Proc. **2**: 89, 1943.

drug in the excreta or perhaps due to the presence of naturally diazotizable substances in the normal excreta, such as compounds produced by Escherichia coli or amino acid groups.

In table 2, patient 1, on a daily oral intake of 3 Gm. of phthalylsulfathiazole, the percentage of drug recovery

TABLE 3.—*Recovery of Phthalylsulfathiazole in Milligrams for Seven Day Period, Patient 2*

	1	2	3	4	5	6	7	Per Cent of Recovery
Daily Intake 3 Gm.								
Urine	150	150	150	150	150	150	150	56.6
Stool	1,111	1,166	1,381	1,638	3,275	1,664	1,566	
Blood	58	63	45	57	81	58	63	
Total	1,319	1,379	1,576	1,845	3,506	1,872	1,779	
Daily Intake 12 Gm.								
Urine	600	600	600	600	600	600	600	54.5
Stool	7,979	3,652	7,128	2,436	8,284	5,460	7,350	
Blood	89	63	81	63	58	81	89	
Total	8,668	4,315	7,809	3,099	9,042	6,141	8,039	

in the stool was 64.9, while in the recovery on the 12 Gm. daily intake the percentage was 41.9.

In table 3, patient 2, the percentage of drug recovery in the stool was 56.6 and 54.5 respectively.

Both tables demonstrate the general tendency of phthalylsulfathiazole to concentrate the drug in the stool to a greater degree on a smaller amount of oral intake. This general trend has been demonstrated many times in our studies.

BACTERIOLOGIC STUDIES

Detailed bacteriologic studies were made on 50 patients having infectious processes in the colon. The studies were directed primarily toward identification, bacterial counts, staining peculiarities and reaction to sugars of the coliform group, the streptococci, the staphylococci and total bacteria.

TABLE 4.—*Bacterial Count of Stools Before and After 3 Gm. of Phthalylsulfathiazole, Patient 1*

Name of Organisms and Counts in Millions (per Gram of Stool)								
Esch. Coli			Streptococci			Staphylococci			Total Bacteria		
Before	Days on Treatment	After	Before	Days on Treatment	After	Before	Days on Treatment	After	Before	Days on Treatment	After
190.0			2.0			3.0			193.0		
	1	56.0		1	1.6		1	1.0		1	73.0
	2	36.0		2	1.0		2	...		2	40.0
	3	5.2		3	1.0		3	0.6		3	5.0
	4	0.2		4	1.7		4	1.4		4	3.3
	5	0.24		5	0.3		5	0.2		5	0.8
	6	0.01		6	0.2		6	0.3		6	0.6
	7	0.05		7	0.19		7	0.15		7	0.4
	8	0.02		8	0.1		8	0.06		8	0.2
Before and After 12 Gm. of Sulfathalidine											
46.4			1.2			3.9			20.0		
	1	5.0		1	0.4		1	0.4		1	5.0
	3	2.6		3	0.2		3	0.4		3	4.0
	8	0.4		8	0.1		8	0.4		8	0.1

These estimations were made before and after administration of phthalylsulfathiazole and were calculated on a unit study of 1 Gm. of stool.

In tables 4 and 5 is shown a bacteriologic study of patients 1 and 2 before and after oral intake of 3 Gm. and 12 Gm. of phthalylsulfathiazole respectively. Studies such as demonstrated in table 4 were made on all patients. (A detailed presentation of all bacteriologic studies is not intended in this publication.) These figures are representative of all studies made. It is evident that the counts are definitely diminished in Escherichia coli, streptococci, staphylococci and total bacteria on 3 Gm. of phthalylsulfathiazole daily, and that, while on 12 Gm. doses daily the bacterial count is diminished more rapidly, it approximates the same level on the seventh or eighth day. Similar findings are demonstrated in table 5.

COMMENT

It is my impression that phthalylsulfathiazole is less toxic and more bacteriostatic than any intestinal agent used previously and that, because it has these properties, smaller doses of this drug may be used to advantage. In our analysis, determinations have been made to show that a daily dose of 3 Gm. taken orally will bring about the desired therapeutic effect in infectious diseases of the colon and that doses of 12 Gm. or more are not essential. Large amounts of phthalylsulfathiazole not only are wasteful but are detrimental.

Patients receiving 12 Gm. of the drug complain of considerable cramping in the abdomen, exaggeration of the liquid consistency of the stool and an increase in

TABLE 5.—*Bacterial Counts of Stools Before and After 3 Gm. of Phthalylsulfathiazole, Patient 2*

Name of Organisms and Counts in Millions (per Gram of Stool)								
Esch. Coli			Streptococci			Staphylococci			Total Bacteria		
Before	Days on Treatment	After	Before	Days on Treatment	After	Before	Days on Treatment	After	Before	Days on Treatment	After
85			3.0			4.0			90		
	2	4.8		2	1.0		2	1.0		2	10.0
	4	0.4		4	0.5		4	0.8		4	5.0
	6	0.1		6	0.4		6	0.4		6	4.0
	11	0.1		11	0.6		11	0.6		11	2.0
Before and After 12 Gm. of Sulfathalidine											
60			1.0			4.0			71.0		
	1	8.8		1	0.01		1	1.2		1	9.7
	3	0.5		3	0.07		3	0.2		3	3.4
	8	0.01		8	0.02		8	0.06		8	0.5

the number of evacuations. In a comparative study made of phthalylsulfathiazole and succinylsulfathiazole one comes to the conclusion that the new sulfonamide is a superior therapeutic agent in colon infections.

CONCLUSIONS

1. Phthalylsulfathiazole is efficacious in colon infections.
2. The new sulfonamide produced no toxic symptoms in 100 patients.
3. A dosage of 3 Gm. daily is preferable to larger amounts.

ABSTRACT OF DISCUSSION

DR. HENRY W. CAVE, New York: My experience with phthalylsulfathiazole, or sulfathalidine, has been in the preoperative preparation of 120 patients for procedures carried out on the colon and of 10 persons with mild forms of ulcerative colitis, in which haustral markings were still obtained, without pseudopolypoid degeneration or stiffening of the colonic wall. I agree with Dr. Streicher that it is not necessary to give doses of 12 Gm. daily. In these cases I have given 6 Gm. as a rule and have found it sufficient to stop bleeding, diminish cramping and show a decided improvement in the appearance of the mucous membrane of the rectal pouch and the lower sigmoid. I have had no toxic effects from the use of the drug preoperatively except in 2 instances. Three of the 10 patients to whom I have given this newer drug sulfathalidine have had it over a period of one year. They have shown good improvement,

gain in weight, diminution in the amount of diarrhea to one or two bowel movements a day, and are apparently well. The mucous membrane is clear There have been 4 who have been on the drug for a little more than six months and have shown improvement. Three have been on the drug for four months and have shown improvement; 1 in this last group did have three recurrences but has now straightened away satisfactorily. The group of 10 patients is too small from which to draw any conclusions. But certainly the group of 80 reported by Dr. Streicher have shown improvements which must be taken notice of. This new drug, which is relatively nontoxic, seems to have beneficial effects on infections of the colon. I do not believe the drug is as satisfactory as succinylsulfathiazole in the preoperative preparation of patients, for the movements are not quite as soft and they did not tend to form scybalous masses as with sulfathalidine in the large intestine, which is a hindrance at times in doing a partial resection of the colon.

Dr. J. Arnold Bargen, Rochester, Minn: Drugs of the sulfonamide series have been very helpful in the treatment of various inflammatory and infectious intestinal disorders. Such drugs have been administered orally, as retention enemas and by subcutaneous and intravenous routes. The very nature of the intestinal tract made it apparent rather early in our study of these drugs that in order to obtain desired results they would have to be given in large amounts. In the treatment of intestinal diseases the drug should be in actual contact with the intestinal wall continuously, and there should be a minimum of systemic absorption and in turn a minimum of systemic intoxication. The drugs which have answered these requirements best and have done most in the treatment of ulcerative colitis and other infectious intestinal diseases are azosulfamide (neoprontosil), sulfaguanidine, succinylsulfathiazole and sulfathalidine. Most of the other sulfonamide compounds, too numerous to mention, were found to be absorbed in too large amounts, when given in effective doses causing in turn too great toxic symptoms, to be adaptable to the treatment of intestinal diseases. Last March I published the results of treatment with sulfathalidine of 37 patients with ulcerative colitis of the streptococcic variety. Our experiences with that group of patients were very similar to those which Dr. Streicher has reported. Since then we have treated at least another 50 patients with this type of colitis, with similar results. The response of at least 70 per cent of these patients to the program of therapy in which sulfathalidine played a prominent role was very good. In the past my colleagues and I have felt that azosulfamide was the drug of choice for the treatment of the streptococcic type of ulcerative colitis. However, a number of patients have had toxic reactions to azosulfamide in the form of erythematous rash, sore throat, chills, fever and the like. It is of interest to note that some of the 37 patients had such reactions and most of them had no similar reactions to sulfathalidine. However, even though toxic reactions to this drug have been minimal in general, and the least common of any of the drugs so far employed, reactions do occur. One of the series, a woman aged 47, had similar reactions to sulfathiazole, succinylsulfathiazole, azosulfamide and sulfathalidine. Another woman, aged 55, had a severe reaction with fever and generalized erythematous rash to succinylsulfathiazole, and a similar reaction to sulfathalidine. By and large, however, when reaction to one of the other drugs occurred, no reaction occurred with the use of sulfathalidine. Furthermore, a good many patients have shown an initial satisfactory response to one of the other three drugs mentioned but the response was not sustained. Such a sustained response promptly occurred by the use of sulfathalidine. We have also used sulfathalidine in the treatment of some cases of recurrent regional ileitis and segmental colitis, with good response in a few. For some years now we have given rather large amounts of succinylsulfathiazole preoperatively for several days to patients on whom intestinal resection has been planned. Occasionally these patients have exhibited rather severe toxic symptoms to the drug. In these cases sulfathalidine has been given without such toxic symptoms or with minimal symptoms. It is important to know that when patients are sensitive to one drug of the sulfonamide series there is another drug available for a similar purpose with less toxicity and yet good effects in selected cases. It seems from the observations so far available that sulfathalidine is such a drug for use in intestinal disorders. Its toxicity is less, it will frequently be associated with satisfactory results when satisfactory improvement does not follow the use of other drugs or when toxic effects follow their use and finally, as Dr. Streicher has pointed out, smaller amounts of the drug are usually more effective than of any of the other drugs in common use for intestinal conditions.

Dr. Burrill B. Crohn, New York: The experiences of Dr. Streicher with the use of phthalylsulfathiazole in infectious diseases of the colon, particularly with ulcerative colitis, are exceedingly promising. The percentage of reported "good" results, the lack of mortality and the absence of toxicity of the drug exceed the best results published to date. For two years I have used the drug in cases of ulcerative colitis and ileitis. My comments are based on purely clinical conclusions as observed at the bedside, as war conditions have made it difficult to carry out extensive bacteriologic studies. The dosage of phthalylsulfathiazole that I have employed is the same used by the author, namely, 3 to 4 Gm. daily by mouth. The drug was prescribed over long periods without deleterious consequences. It is almost entirely nontoxic, hemolytic anemia has not been observed (in contrast with sulfathiazole), toxic rashes are nonexistent, and no adverse effect is noted on the temperature or the appetite. One case only of mild and transient hepatitis with jaundice was observed, symptoms disappearing within a few days of the discontinuance of the specific therapy. In its clinical efficacy, phthalylsulfathiazole has few advantages over succinylsulfathiazole except a lesser toxicity, but it does not offer any greater, if as great, therapeutic result. Succinylsulfathiazole gives better clinical results, particularly in the more severe and more acute types of cases. The diminution in the fever and in the number of stools may be more gradual but occurs in a larger percentage of cases. Nowhere in my experience with either the phthalyl or the succinyl compound of sulfathiazole have I ever approached such an optimistic picture as reported by the author as 84 per cent of good, 6 per cent of fair and only 10 per cent of poor reactions to treatment in inflammatory conditions of the colon, most of which cases (80 per cent) comprised acute and chronic ulcerative colitis. This last year particularly has been marked by the extreme severity of some of the acute cases, in 2 of which, fulminating in character, death occurred in spite of the use of large doses of both varieties of the drug. The chronic ulcerative colitis cases also have been very resistant to forms of therapy. My former, somewhat guarded enthusiasm and advocacy of succinylsulfathiazole in the treatment of colitis continues, but these moderate results are not equaled and surely not surpassed by the newer, more concentrated bacteriostatic effects of sulfathalidine. The best clinical results that I have seen have been in the combined use of the intestinal sulfonamide drugs by mouth, coincident with the employment of acriflavine base 1:4,000 as daily retention enemas. In the combined forms of colitis and ileitis and in the cases of ileitis and ileojejunitis sulfathalidine seems far superior to succinylsulfathiazole, it controls fever, diarrhea and abdominal cramps, and it has a striking effect in bringing about the spontaneous closure of persistent abdominal small fistulas and perirectal abscesses and fistulous tracts.

Dr. Michael H. Streicher, Chicago: The discussions presented by Drs. Cave, Bargen and Crohn are conclusive and add much to this exposition. I concur in the opinion of Dr. Cave that succinylsulfathiazole is more satisfactory than phthalylsulfathiazole in preoperative preparation of patients. It is of interest to know that Dr. Bargen has had favorable experiences with the use of smaller doses of sulfathalidine in ulcerative colitis. The results referred to by Dr. Crohn in alleviating the symptom complex in cases of ileitis, ileojejunitis and ulcerative colitis with sulfathalidine are promising. Discussions such as these are of practical importance and will encourage a more extensive evaluation of the new sulfonamide.

BERYLLIUM POISONING

H. S. VanORDSTRAND, M.D.
ROBERT HUGHES, M.D.
CLEVELAND
J. M. DeNARDI, M.D.
LORAIN, OHIO
AND
MORRIS G. CARMODY, M.D.
PAINESVILLE, OHIO

Beryllium poisoning is an industrial disease that demands attention because of the loss in manpower and the fatalities incident to increased production in the beryllium industry. During the past four years 170 cases of poisoning were seen among workers in three plants producing beryllium, its compounds and its alloys. Manifestations included dermatitis, chronic skin ulcer and inflammatory changes in the respiratory tract, skin and respiratory tract changes occurring concurrently or singly. The severest manifestation was diffuse pneumonitis. This caused the death of 5 patients.

The importance of the beryllium industry during the present war and the anticipated postwar demands for civilian products emphasize the need to know the potential hazards of beryllium production. Of great importance in war production is beryllium copper alloy, which is corrosion resistant, nonrusting, nonsparking and nonmagnetic and has good electrical conductivity, high strength and excessive fatigue resistance. It is used in precision instruments, altimeters, airplane pipe lines, carburetors, telephone switchboards and a host of other articles. Because beryllium is a strategic metal, its availability is governed by strict priority regulations.

In the processing of the ore, beryllium oxide is extracted under high temperatures from the crushed inert ore beryl by concentrated acids and fusion methods. Fumes and dusts of by-products, wherein lie the production hazards, are present at the various stations during the processing.

REVIEW OF THE LITERATURE

Experiments conducted by Fairhall and his associates [1] showed that several beryllium compounds are toxic to animals. Both pneumonitis and dermatitis were produced experimentally. Toxicity was demonstrated for the acid radical of such salts as fluoride or oxyfluoride and for certain hydrolyzed beryllium salts, such as chloride or sulfate. They were unable to establish toxicity for beryllium per se but stressed the fact that local irritation reactions could be produced in animals by the hydrolysis of soluble beryllium salts, regardless of the mode of administration.

In 1933 Weber and Engelhardt [2] in investigating the effects of beryllium dusts on guinea pigs concluded that lung damage from inhalation was similar to that produced by inhalation of corrosive gases, such as phosgene or chlorine. Fabroni [3] coined the term berylliosis for this pathologic condition.

In 1936 Gelman [4] reported his observations on workers in beryllium plants in Moscow. He termed the disease poisoning by vapors of beryllium oxyfluoride and described two phases of clinical symptoms. The first phase consisted of chills and fever much like those of metal fume fever. The second phase, which developed in two days or more, was characterized by extensive bronchioalveolitis. In elaborating this report in 1938 Gelman [5] described roentgenologic changes in the lungs and skin changes. The lung condition was attributed to the action of fluorine, which Gelman thought was separated from beryllium oxyfluoride at the level of the bronchioles and alveoli.

In 1940 Berkovits and Israel [6] attributed symptoms in a series of 46 cases to beryllium fluoride. They stated that serial roentgenograms were essential in diagnosis and that in some cases roentgenograms did not become normal after symptomatic recovery but showed changes "resembling pulmonary sclerosis."

In addition to our previous communication [7] Kress and Crispell [8] recently reported 4 cases of chemical pneumonitis in men working with fluorescent powders containing beryllium.

ETIOLOGY

The specific etiology of beryllium poisoning is unknown, but the pathologic findings, the clinical course of the disease and data obtained by others in the investigation of the toxicology of beryllium suggest a chemical reaction as the cause.

In our patients clinical manifestations occurred only after exposure during processing of the ore and cleared completely when proper precautions were observed or when work was terminated. The disease was not limited to men in one type of work or in one phase of production: it occurred in maintenance men, in furnace tenders and in workers with distillation and electrolytic processes. Incidence and severity were proportional to the degree of exposure and chemical irritation of dusts and fumes.

That several beryllium compounds are toxic to animals and that the disease occurs in men working at various jobs indicate that several beryllium compounds may be causative. The acid radical salts, according to Fairhall and his associates,[1] appear more toxic than other compounds and are capable of producing acute reactions. It has not been proved, however, that severe damage may not be caused by beryllium compounds other than the acid radical salts.

DERMATOLOGIC MANIFESTATIONS

The dermatologic manifestations of beryllium poisoning were contact dermatitis and skin ulcer. These manifestations occurred in 42 patients. Frequently the lesions were associated with rhinitis and nasopharyngitis or with other manifestations of beryllium poisoning. In a large percentage of patients the dermatitis occurred within one week of employment. Most patients had contact with beryllium sulfate, beryllium fluoride or beryllium oxyfluoride, which are soluble and, as Fairhall and others have shown, are capable of producing local irritation. Inadequate cleanliness, excessive perspiration and failure to use protective devices were contributing factors.

From the Cleveland Clinic (Drs. VanOrdstrand and Hughes).

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2. Weber, H. H., and Engelhardt, W. E.: Untersuchung von Stauben aus der Beryllíumgewinnung, Zentralbl. f. Gewerbehyg. u. Unfallverhütung, **10**: 41, 1933.
3. Fabroni, S. M.: Patologia pulmonare da polveri di berillio, Med. del Lavoro, **26**: 297, 1935.
4. Gelman, I.: Poisoning by Vapors of Beryllium Oxyfluoride, J. Indust. Hyg. & Toxicol. **18**: 371, 1936.
5. Gelman, I.: Beryllium, Occupation and Health, Supplement, International Labor Office, Geneva, 1938.
6. Berkovits, M., and Israel, B.: Changes in the Lungs Caused by Oxyfluoride Intoxication, Klin. Med. **18**: 117, 1940.
7. VanOrdstrand, H. S.; Hughes, Robert, and Carmody, M. G.: Chemical Pneumonia in Workers Extracting Beryllium Oxide, Cleveland Clin. Quart. **10**: 10, 1943.
8. Kress, J. E., and Crispell, K. K.: Chemical Pneumonitis in Men Working with Fluorescent Powder Containing Beryllium, Guthrie Clin. Bull. **13**: 91, 1944.

The contact dermatitis was often severe. The eruption was an edematous, papulovesicular dermatitis with the most severe reaction occurring on the exposed portions of the body, namely the hands, arms, face and neck (fig. 1 *a*). At times there was a great deal of weeping. Itching was intense. Some patients had the sensation of burning.

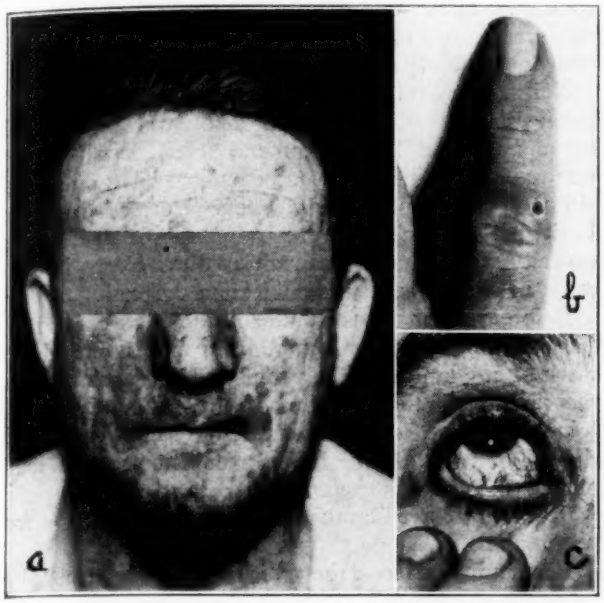

Fig. 1.—*a*, contact dermatitis; *b*, contact dermatitis and associated early conjunctivitis; *c*, beryllium ulcer.

After exposure to beryllium had terminated, the dermatitis tended to subside and clear up. Certain local measures were found to be beneficial. Local treatment consisted of moist wet packs of Burow's solution 1 part to 9 parts of water. For less acute cases calamine lotion with 0.5 per cent phenol was used. After the reaction subsided and desquamation began, the topical remedy was changed to boric acid ointment with 0.5 per cent phenol.

Conjunctivitis occurred with "splash burn" or in association with contact dermatitis involving the upper part of the face. Signs and symptoms were similar to those of acid burns or catarrhal conjunctivitis (fig. 1 *b*). No complications nor sequelae were observed, and healing was complete in all cases. Local treatment included the use of boric acid solution, mild zinc and epinephrine in solution, and a salve of holocaine (phenacaine hydrochloride) and epinephrine.

In beryllium ulcer a beryllium crystal was deposited within the skin layers. The lesion developed only after trauma, such as an abrasion or a laceration, and was seen predominantly among beryllium sulfate workers. At this site of trauma the initial lesion, a small indurated papule surrounded by an area of erythema, appeared and later underwent necrosis.

The ulcer occurred on exposed parts, particularly the forearms and hands, and was discrete and as a rule single (fig. 1 *c*). It caused little distress unless infected or located near a joint and subjected to the trauma of motion.

Treatment was early incision of the papule and curettage of the fibrous base. Healing was complete in eight to ten days. If neglected, the lesion persisted until traumatic extrusion of the inclusion center occurred. This center consisted of caseous material within which the beryllium crystal usually could be identified. Healing would not take place until the embedded crystal was eliminated.

CASE 1.—A man aged 62 began work at the beryllium company as a furnace operator on March 5, 1942. On Dec. 22, 1943 examination showed an infected beryllium ulcer on the first joint, dorsal aspect, of the right thumb. This was excised, and pathologic examination revealed that the ulcer extended through the epidermis and into the reticular stratum of the dermis. At the edge of the ulcer, squamous epithelium extended into the dermis and also for a short distance over the base. In the neighborhood of the ulcer the epidermis showed keratosis, acanthosis and parakeratosis. In the basal layers the nuclei were larger than natural and slightly hyperchromatic, but there was less than the average number of mitotic figures in these cells. The base of the crater of the ulcer was covered by a layer composed of fibrin, fibrinoid material and necrotic tissue, all enmeshing polymorphonuclear leukocytes, lymphocytes and macrophages in various stages of degeneration. There was beginning organization of this exudate, beneath which was a layer of granulation tissue. In the region of the ulcer the dermis was edematous, well vascularized and densely and diffusely infiltrated with polymorphonuclear leukocytes, plasma cells, large mononuclear cells and some eosinophils. Deeper down, beneath the ulcer, the exudate in the dermis was composed mainly of large and small mononuclear cells and occasional plasma cells. In the subcutis the infiltration was mainly of polymorphonuclear leukocytes. No inorganic particles, amorphous or crystalline, suggestive of beryllium, were recognized in the microscopic examination of this tissue.

The diagnosis was subacute necrotizing ulceration and inflammation of the skin of the back of the hand.

Fig. 2.—Pulmonary edema: Fluid in alveoli, enmeshing an occasional large or small mononuclear cell: Infiltration of large mononuclear cells and lymphocytes in the interalveolar septums. No polymorphonuclear leukocytes in the exudate.

We have observed that a person with a chemical dermatitis, if allowed to continue this work, may develop chemical bronchitis and pneumonitis. The occurrence of dermatitis in new workers has been used as a rough barometer of individual susceptibility to pulmonary or bronchial irritation.

RESPIRATORY TRACT MANIFESTATIONS

Ninety patients were seen with chemical nasopharyngitis and/or chemical tracheobronchitis.

Chemical nasopharyngitis occurred principally among tenders at furnaces where hydrous beryllium sulfate was ignited to produce beryllium oxide and where

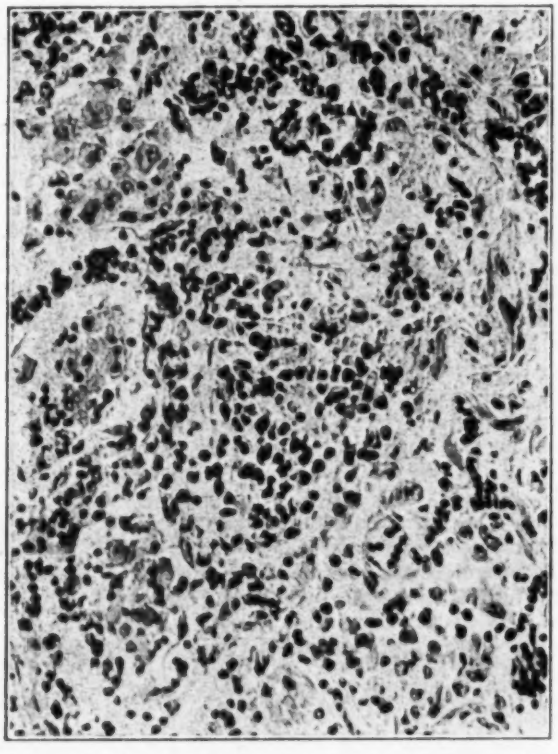

Fig. 3.—Lobular pneumonitis: Plasma cells, lymphocytes and large mononuclear cells in alveoli and interalveolar septums. Note striking absence of polymorphonuclear leukocytes.

anhydrous beryllium fluoride and magnesium were used in the production of pure beryllium metal.

Irritation of nasal and pharyngeal mucous membranes varied in degree. The chief complaint made by these patients was soreness of the nose and throat associated with mild epistaxis, manifested by blood clots being blown from the nose. Some patients also complained of a peculiar metallic taste. As a rule, cough was not present.

There was diffuse swelling of mucous membranes with considerable hyperemia. Epistaxis was secondary to vascular engorgement in the nasal mucosa. In some untreated cases fissures occurred and persisted for two months. The patients were afebrile, and chest and laboratory findings were normal.

Treatment of chemical nasopharyngitis was primarily prophylactic. Exposure was avoided by use of an air mask or by termination of employment. Saline irrigations and liquid petrolatum nose drops afforded symptomatic relief. Most cases cleared in three to six weeks.

CASE 2.—A man aged 22, employed as furnace tender for ignition of hydrous beryllium sulfate, was seen on Sept. 14, 1943 complaining of the nasopharyngeal symptoms and the objective findings described. Seventy-two hours after treatment was instituted, symptoms and objective findings cleared. Six weeks later he had a recurrence resulting from the use of a faulty air mask. Symptoms promptly subsided when a new mask was secured.

As did nasopharyngitis, chemical tracheobronchitis occurred predominantly in furnace tenders. Notable exceptions, however, were general helpers or maintenance men. It was characterized by (1) cough, (2) rales in both lungs and (3) normal serial roentgenograms. The commonest complaint was cough, nonproductive except for occasional blood-streaked mucoid sputum. Symptoms of nasopharyngitis were usually concurrent, and in addition some patients had anorexia and weight loss. About one half had mild dyspnea.

Rales, characteristically present in the early phase of inspiration over the lower lung fields, were fine early in the disease and later became coarse. Vital capacity was reduced. There was an occasional low grade fever, although the temperature was never elevated more than 1 degree and chills were never associated. Vital capacity was reduced as much as 30 per cent in some cases in which there was subjective dyspnea.

Before the symptoms would subside, it was found that the patient must be removed from exposure and that work of any kind must be prohibited. Working during this illness proved dangerous, regardless of whether the job was changed or continued at the same station with the use of an air mask. Before complete rest was made mandatory, it was found either that recovery of a patient was delayed or that the patient developed a true pneumonitis.

For similar reasons the patient was not permitted to return to work until chest findings were normal, even though he was symptom free.

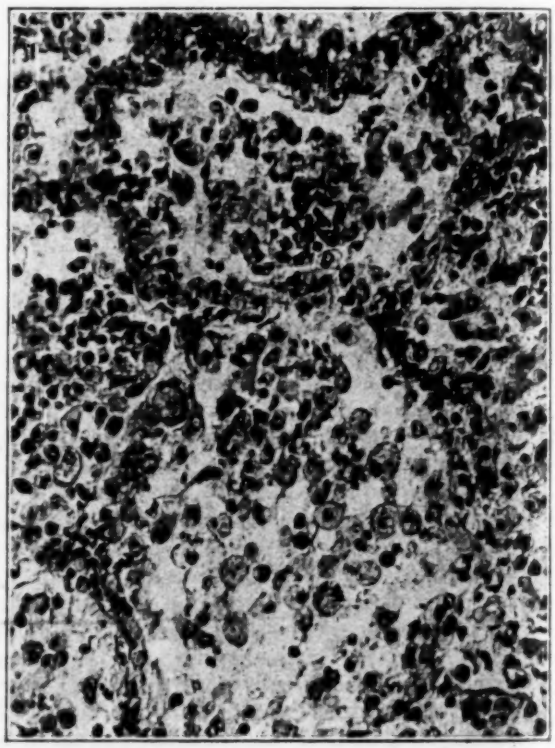

Fig. 4.—Lobular pneumonitis: Large mononuclear cells with granular or foamy cytoplasm, some plasma cells and occasional lymphocytes within alveoli and in interalveolar septums.

The chest was examined roentgenologically each week for three weeks after onset of the disease. No case of pneumonitis developed after this period. The illness lasted from seven to twenty-one days. Supportive measures were used for symptomatic relief.

CASE 3.—A man aged 25 was seen on Sept. 14, 1943 complaining of intractable cough and nasal irritation of five days' duration. He frequently coughed up traces of blood, complained of a "metallic taste" and had anorexia with a 4 pound (1.8 Kg.) weight loss. There were a slight elevation in temperature (99.4 F.), moderate injection of the nasopharyngeal mucosa

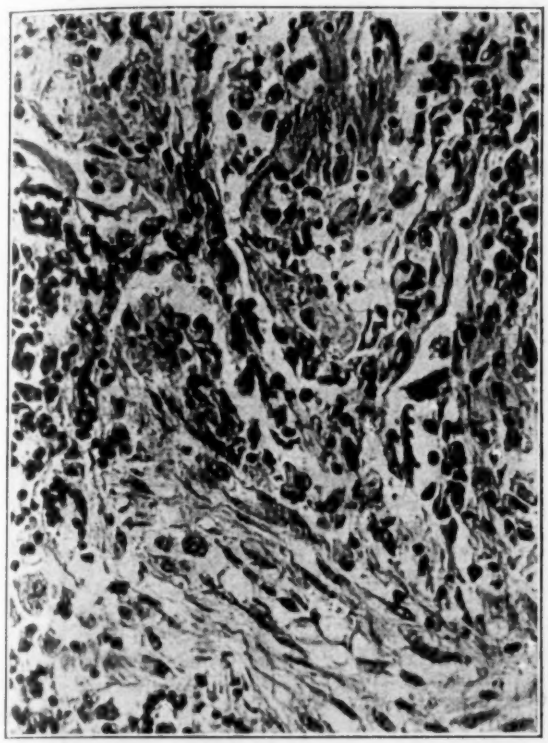

Fig. 5.—Lobular pneumonitis: Beginning organization. Fibroblasts replacing intra-alveolar and interalveolar exudate of plasma cells, lymphocytes and large mononuclear cells.

and numerous fine inspiratory rales over the lower lungs. Vital capacity was 3,400 cc., 1,000 cc. below the computed normal. On roentgenologic examination the chest was normal.

During the two weeks in which he was away from work and on a modified rest regimen, his symptoms subsided, auscultatory findings disappeared and vital capacity returned to normal.

Chemical pneumonitis developed in 38 workers on many different jobs; no one station could be isolated as the source of exposure. It represented the severest form of this industrial disease and progressed without exacerbation or remission either to complete recovery or to death.

Symptoms were (1) cough with occasional blood-streaked sputum, (2) substernal burning pain, (3) shortness of breath, (4) cyanosis in most cases, (5) abnormal taste, (6) anorexia with some weight loss and (7) increasing fatigue.

In each instance the onset was insidious and was characterized by dry cough and occasional dull substernal burning pain. The pain tended to disappear after one or two weeks, but the cough progressed in severity with expectoration of a small amount of blood in almost every case. Within a few days or a week after onset of cough, these patients complained of dyspnea on exertion. This dyspnea was progressive, became severe even at complete rest, was frequently associated with cyanosis, and in varying severity lasted from two to five weeks. During this time the respiratory rate ranged from 26 to 40 per minute. Anorexia as well as weight loss of 5 to 14 pounds (2.3 to 6.4 Kg.) occurred in every case. In contrast with the severity of symptoms the temperature was often normal and was rarely elevated more than 1 to 2 degrees in patients who recovered. The last symptoms to disappear with recovery were cough and effort dyspnea. Duration of the disease from inception to complete recovery varied from five weeks to four months.

Dominant physical findings were rapid pulse, rales over both lungs and reduced vital capacity. Within a few days to a week after onset of the disease, a few fine rales could be heard during inspiration over both the anterior and the posterior aspect of each lung base. As the disease progressed, the rales increased in number, became medium to moderately coarse and were heard throughout both lung fields. Vital capacity was reduced to as low as 2,000 cc.

Signs of infection were conspicuously absent: Temperature was not greatly elevated except in the terminal stages of the fatal cases, the erythrocyte sedimentation rate was essentially normal, and blood counts and blood chemistry were also normal. In 2 patients bronchoscopy showed a hyperemic mucosa with some edema, and in 1 of these a diffuse patchy exudate was present in the lower tracheobronchial tree. Aspirated secretions from these 2 patients and expectorated secretions from others were negative on bacteriologic study for pathogens. Blood oxygen tension was not determined in any case.

Fig. 6.—Pneumonitis: A focus showing beginning organization. Squamous metaplasia of lining epithelium of alveolus and terminal bronchiole.

Roentgenologic changes in the lung fields did not usually appear until two to three weeks after the onset of symptoms and physical signs. Changes were bilateral and diffuse in all cases and varied with the severity of the disease. In order of appearance the changes were (1) diffuse haziness of both lungs, (2) development of

soft irregular areas of infiltration with prominence of peribronchial markings, (3) absorption of soft infiltration and appearance of discrete large or small conglomerate nodules scattered throughout both lung fields and (4) clearing of the lung fields after one to four months. It is important to emphasize that clearing of

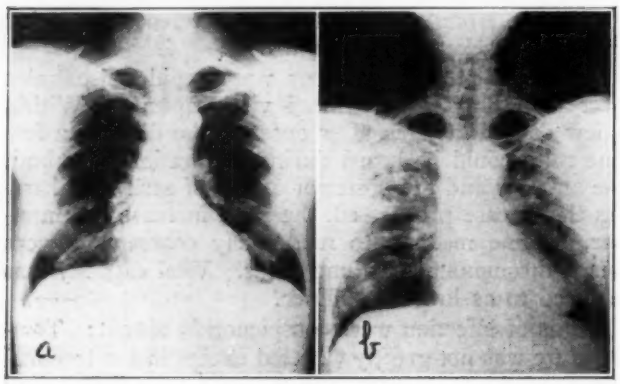

Fig. 7 (case 4).—*a*, normal appearance on routine chest examination made in 1941 before patient worked in beryllium industry. *b*, diffuse infiltration of both lungs twenty-six days after onset of illness.

the lungs on roentgenologic examination occurred as a rule before complete subsidence of symptoms or disappearance of all physical signs.

Beryllium Content of Lungs

Case	Duration of Exposure	Mg. of Beryllium per 10 Gm. of Tissue		Type of Work
		Wet	Dry	
6	10 mo.	0.33	1.89	Beryllium copper production and general repair
7	40 days	0.03	0.19	Beryllium copper production
9	Indefinite	0.04	0.20	Chemist and metallurgist

Necropsies on 5 patients showed atypical pneumonitis. The pathologic findings were similar in all cases. Significant changes were found only in the lungs, which were grossly heavy (1,100 to 1,380 Gm. each). Striking features in lung tissue sections in all cases were large numbers of plasma cells, relative

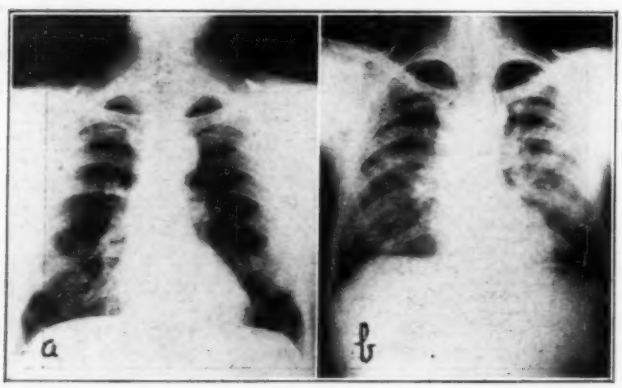

Fig. 8 (case 4).—*a*, complete clearing of lungs demonstrated approximately one hundred and twenty-one days after onset of pneumonitis. *b*, recurrent pneumonitis: appearance four weeks after onset of second attack.

absence of polymorphonuclear infiltration, diffuse pulmonary edema and hemorrhagic extravasation. Fibroblasts with evidence of organization were present, although in patients who recovered no fibrosis was evident on roentgenologic examination of the chest.

Representative microscopic sections of lung tissue, illustrating pathologic findings in chemical pneumonitis, were selected and reported by Dr. Harry Goldblatt of Western Reserve University (figs. 2, 3, 4, 5 and 6).

Chemical analysis of the lungs for beryllium content was made in 3 cases by Dr. Lawrence T. Fairhall and disclosed the amounts given in the accompanying table.

Oxygen and rest were the most beneficial therapeutic measures. Oxygen was administered intermittently by mask or continuously by tent, depending on the severity of dyspnea and cyanosis. Bedrest was found to be most important during the acute phase to prevent acute pulmonary edema, as was restriction of the patient's activity until all signs and symptoms disappeared. Relapse or recurrence was secondary to precipitous activity, such as working about the house. Under such conditions reexposure was not necessary to cause a relapse. Other therapeutic agents, such as aminophylline, hypertonic glucose, and calcium gluconate, were of doubtful value.

Two cases of recovery from chemical pneumonitis and 5 fatal cases are presented to illustrate (1) occurrence of the disease in workers at different jobs, (2) recurrence of the disease after reexposure (case 4), (3) variability of the roentgenologic appearance of the lungs, (4) the importance of rest and (5) pathologic findings.

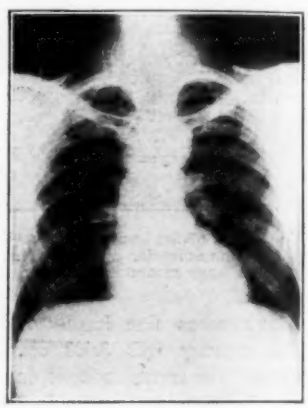

Fig. 9 (case 4).—Essentially normal chest. Survey film made five months after onset of second attack.

CASES OF RECOVERY

CASE 4.—A man aged 55, a general helper and worker at various stations in the beryllium plant, was seen on May 3, 1942 complaining of anorexia, shortness of breath and cough of twenty-six days' duration. He initially experienced substernal burning pain, and his cough was nonproductive except for slight hemoptysis.

There were mild cyanosis, shallow respiration, fine to medium rales on inspiration scattered throughout the lungs but most pronounced in the lower two thirds, and a reduced vital capacity (2,400 cc., computed normal 4,500 cc.). The patient had lost 8 pounds (3.6 Kg.).

Stereoroentgenograms of the chest showed extensive infiltration throughout both lungs with nodular configuration below the right clavicle (fig. 7). The heart was normal in size, shape and position, and the aorta appeared normal.

Bronchoscopy disclosed only generalized hyperemia of the tracheobronchial mucosa. A minimum of rather frothy secretion was aspirated and was negative on smear and culture for all pathogens. Expectorated sputums were likewise negative. Blood counts and other laboratory tests were normal. A diagnosis of chemical pneumonitis was made.

With bedrest, symptoms disappeared in two months, and final roentgenologic examination of the chest showed no residual pathologic condition (fig. 8*a*). Vital capacity returned to normal, 4,500 cc. The patient was discharged and advised to secure different employment.

The patient was again seen on Nov. 12, 1942 complaining of the same symptoms of three weeks' duration. He had returned to work as a general helper but had avoided working around beryllium oxide. Examination revealed a recurrence of chemical pneumonitis (fig. 8*b*). This second illness was nearly fatal, lasted five months and was complicated by bacterial (pneumococcic) pneumonia and phlebitis. He required pro-

longed oxygen therapy. Recovery from the second attack was complete (fig. 9).

CASE 5.—A woman aged 39 was admitted to the hospital ten weeks after beginning work with the complaints of chest pain, shortness of breath, loss of appetite, loss of 14 pounds (6.4 Kg.) and fatigue. For eight weeks she had worked in the department where beryl ore was melted and had helped repair a beryllium fluoride furnace immediately adjacent to her regular station. Seven weeks after she began to work an insidious cough developed and was progressive.

Temperature was normal, respirations were rapid (35 per minute) and shallow, mild cyanosis was present, and fine rales were heard throughout both lungs on inspiration.

A diagnosis of pneumonitis was confirmed by roentgenologic examination. Roentgenograms demonstrated an atypical nodular infiltration, which resembled pneumonoconiosis (fig. 10 *a*). The patient remained in the hospital seven weeks. Her temperature remained normal. Treatment consisted in supportive therapy and oxygen to control dyspnea and cyanosis. Recovery was complete, and follow-up study showed entire clearing of the lungs (fig. 10 *b*).

FATAL CASES

Of the 38 patients with chemical pneumonitis 5 died. In all cases the clinical symptoms and physical findings were similar. Evidence of upper respiratory tract involvement was present, physical findings were those described, and laboratory reports were essentially normal.

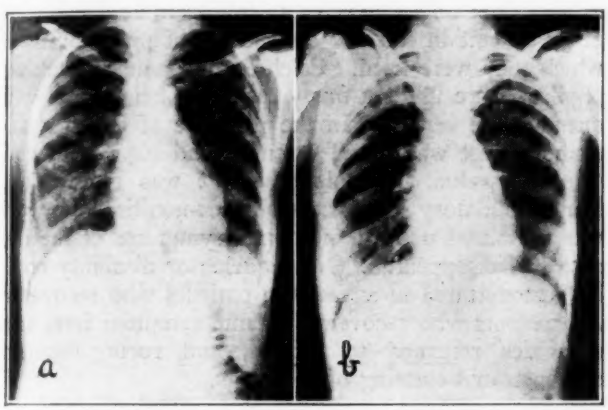

Fig. 10 (case 5).—*a*, diffuse atypical nodular infiltration approximately twenty-four days after onset of illness (appearance resembles pneumonoconiosis); *b*, complete clearing of nodular infiltration nine weeks after onset of pneumonitis.

CASE 6.—A man aged 48, who worked in the beryllium copper department on production and general repair for ten months, was admitted to the hospital on Jan. 20, 1943 after stopping work because of cough, shortness of breath and substernal pain. Symptoms were of three weeks' duration, had begun insidiously and were progressive. The temperature was normal. There were rales throughout the chest, rapid and shallow respirations, severe dyspnea and moderate cyanosis. Roentgenologic examination confirmed the diagnosis of pneumonitis (fig. 11). Despite continuous oxygen therapy by tent and supportive treatment the patient died on the sixty-second day of his illness.

CASE 7.—A boy aged 18, who worked on production in the beryllium copper department for forty days, was admitted to the hospital on May 19, 1943 four days after stopping work because of cough, shortness of breath and substernal burning pain. Symptoms were of one week's duration and were progressive. After admission severe dyspnea and cyanosis developed, and respirations became rapid and shallow. Oxygen and supportive therapy were not effective, and the patient died on the forty-fourth day of his illness. Physical findings and roentgenograms of the chest confirmed the diagnosis of pneumonitis (fig. 12).

CASE 8.—A woman aged 35 worked in the grinding department for forty-nine days. She attributed her illness to "sulfuric acid fumes." She was admitted to the hospital on June 22, 1943, thirteen days after stopping work because of cough, severe dyspnea and cyanosis. Symptoms were of fifteen days' duration. Physical findings and roentgenograms of the chest were typical of pneumonitis. Despite intensive oxygen therapy and supportive measures the patient died on the twenty-first day of her illness. Only one roentgenogram of the chest was made because of the severe symptoms. This film, which is not available for reproduction, showed a diffuse early pneumonitis.

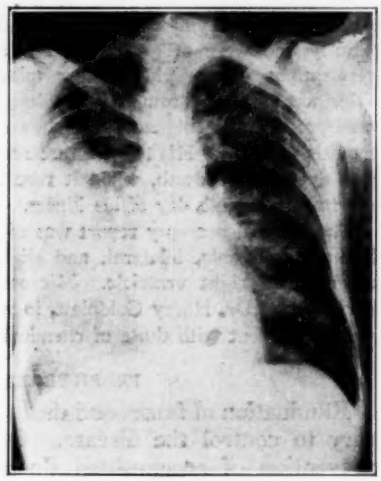

Fig 11 (case 6).—Diffuse pneumonitis five and one-half weeks after onset of symptoms. Disease progressive and followed by death on sixty-second day of illness.

CASE 9.—A man aged 42, a founder of one of the beryllium plants and a chemist and metallurgist, entered the hospital on April 18, 1943. One week previously he complained of sore throat, intermittent low grade fever (99.6 F.) and blood-streaked sputum. On admission his temperature was 101 F. Respirations were 26 per minute. The nasopharynx was reddened, and a few crepitant rales were heard during inspiration over both lung bases. Roentgenologic examination of the chest showed some haziness over both lower lung fields. Blood count and sputum examinations were normal. A tentative diagnosis of atypical pneumonia was made.

Chemotherapy, which had been prescribed at home, was continued in the hospital for several days. Cough, shortness of breath and mild cyanosis developed. Chemotherapy was discontinued, and the temperature returned to normal. On the basis of the roentgenologic and clinical findings a revised diagnosis of chemical pneumonitis was made. The patient's progress was satisfactory, and after twelve days he insisted on leaving the hospital. Roentgenograms showed some clearing of the lungs, and respiratory symptoms had subsided considerably.

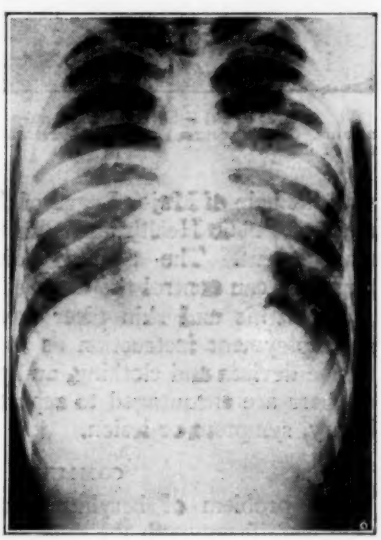

Fig. 12 (case 7).—Diffuse pneumonitis three weeks after onset of illness. Death occurred on forty-fourth day of illness.

The patient did not remain in bed and two days later suffered an acute attack of pulmonary edema. He was readmitted to the hospital with severe cyanosis, fever (103 F.) and severe dyspnea. He died two days later, sixteen days after onset of the illness.

This report stresses the importance of complete rest during the course of chemical pneumonitis. Despite initial improvement, early exertion precipitated a fatal

attack of acute pulmonary edema. Roentgenograms of the chest showed initial improvement; later roentgenograms were not obtained.

CASE 10.—A man aged 42, a general process worker, was the first patient observed by us with chemical pneumonitis in the beryllium industry. He was admitted to the hospital on Dec. 30, 1940 with cough, shortness of breath, blood-tinged sputum and cyanosis. Symptoms began insidiously three weeks previously and were progressive. The temperature was 99.2 F., respirations were rapid (44 per minute) and shallow, coarse rales were heard throughout the lungs and moderate cyanosis was present. Roentgenograms showed a severe diffuse pneumonitis (fig. 13). His temperature remained below 100 F. until two days before death, when it rose to 104.5 F. He died on the twenty-seventh day of his illness.

The original necropsy report was of acute organizing atypical bronchopneumonia, bilateral, and slight dilatation of the right antrum and right ventricle. Microscopic lung sections were reviewed by Dr. Harry Goldblatt, in whose opinion the findings were consistent with those of chemical pneumonitis.

PROPHYLAXIS

Elimination of fumes and dusts at all stations is necessary to control the disease. Of equal importance is prevention of accumulated dusts on floors and rafters. In all three plants the incidence dropped considerably after proper exhaust fans were used to remove fumes, after protective shields were placed around furnaces and after general housecleaning measures were strictly observed. Protective clothing, air masks and even gas masks were also instituted for those directly concerned with the processing. These measures were installed in these three plants with the help of Major Leggo of the Ohio State Department of Public Health and with the cooperation of the management. The results indicate that preventive measures can control the disease.

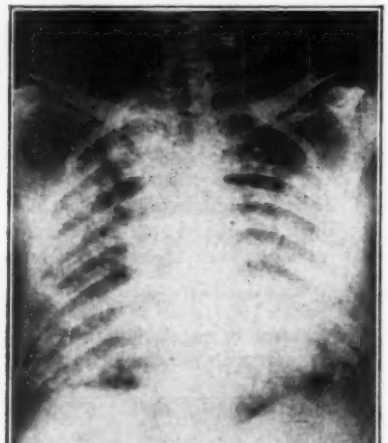

Fig. 13 (case 10).—Severe diffuse pneumonitis. Death occurred on twenty-seventh day of illness.

Dermatitis and skin ulcer have been prevented by preemployment instruction as to hazards, use of protective devices and clothing, and personal hygiene. All workers are encouraged to report promptly any minor injury, symptom or lesion.

COMMENT

The problem of beryllium poisoning may become more significant with the development of this industry. It is important that potential production hazards be recognized and precautions taken for the control of dusts and fumes.

The specific etiology of beryllium poisoning is not known. Apparently manifestations can be caused by several beryllium compounds, severity of symptoms being dependent on amount of exposure, toxicity and concentration of the substance, and possible individual sensitivity. In this study patients employed in the sulfating and the oxyfluoride process showed the highest incidence of the disease. The chemical nature of this poisoning is indicated by its occurrence at work, absence of appreciable fever, normal sedimentation rate, normal blood studies and failure to demonstrate any pathogens on examination of bronchial secretions. Recurrence of pneumonitis on reexposure occurred in 1 patient, and until more is known about the control of this disease all such patients should be advised to change their work.

Preventive measures have been very successful in controlling the incidence of the disease. Prophylaxis has been the largest factor in diminishing the morbidity and eliminating the mortality in the last two years. Safety clothing, masks, adequate ventilation and properly protected equipment have proved of value in the prevention of beryllium poisoning.

The evidence on which a diagnosis of chemical pneumonitis is made includes (1) a history of exposure to fumes and dusts arising in the production of beryllium, (2) decrease in vital capacity, (3) dyspnea and in advanced cases cyanosis, especially in chemical pneumonitis, and (4) roentgenologic findings of edema or soft irregular areas of infiltration.

The most important single factor in the treatment of beryllium poisoning is avoidance of further exposure to beryllium fumes and dusts. Sulfonamide drugs were of no benefit in the few early cases of pneumonitis in which they were tried. Calcium gluconate and aminophylline were used in many cases of pneumonitis with questionable benefit. In the presence of dyspnea and cyanosis rest was found essential and oxygen of considerable value. Complete bedrest was regarded as being mandatory in all cases of pneumonitis. No work was permitted until all signs and symptoms of the disease had disappeared. No sequelae or disability could be demonstrated in any of the patients who recovered. All patients who recovered became symptom free, vital capacities returned to normal, and roentgenograms demonstrated clearing of the lungs.

SUMMARY

A disease entity has been encountered in workers in the beryllium industry. In three plants in the Cleveland area 170 workers have been affected by dermatologic and/or respiratory tract manifestations of the disease. When the respiratory tract is involved, the disease may progress to a symptom complex resembling chemical pneumonitis, which caused the death of 5 workers.

Psittacosis.—Apart from parrots and cockatoos, the only other group of wild birds known to be infected in nature are the fulmar petrels (Fulmarus glacialis) of the Faroe Islands in the North Atlantic. The young of these birds are an important source of food for the Islanders, and during the months of August and September a considerable proportion of the population is engaged in capture and preservation of the fledgling birds. In September 1933 an epidemic of pneumonia involving 71 persons, with 8 deaths, first called attention to the possibility of psittacosis being involved. In each subsequent year to 1937, numbers of cases ranging from 13 to 35 were recognized, and in 1938 the condition was definitely shown to be psittacosis by the isolation of virus both from human autopsy material and from young fulmars and by positive complement fixation tests with patients' serum.—Burnet, Frank MacFarlane: Virus as Organism, Cambridge, Mass., Harvard University Press, 1945.

Special Article

UNTOWARD REACTIONS ATTRIBUTABLE TO ATABRINE

Army experience in all malarious theaters has shown atabrine to be extremely valuable for the suppressive treatment of malaria. Untoward reactions possibly attributable to the drug have been few, considering the large numbers of men who have been taking it and the long periods during which it has been administered. In no instance have reactions been of sufficient consequence to warrant discontinuance of the drug in a military organization or in a geographic area. As a rule, minor unpleasant reactions, such as intestinal disturbances, which not infrequently occur within the first few suppressive doses of atabrine, disappear in a few days when the drug is continued.

In the latter part of 1943, medical officers in the Southwest Pacific Area called attention to a characteristic cutaneous syndrome which was occurring in soldiers who had been evacuated from New Guinea and adjacent islands. Lieut. Col. Charles Schmitt and Major Thomas Nisbet, dermatologists stationed with general hospitals in that area, were the first to submit to the Surgeon General official reports in which they described the disease and its probable causation. Lieut. Col. John Ambler, consultant in dermatology in the Southwest Pacific Area, compiled valuable data on all of the pertinent aspects of the disease and summarized the experience of all the medical officers in the theater who had submitted verbal and written reports. Major A. M. Harvey and his associates conducted important investigative work which contributed valuable information on the primary etiologic factor. Essentially, later reports made by medical officers in this country as well as in other theaters have confirmed the observations which were included in these early reports from the Southwest Pacific Area, where the disease was first recognized. Later on, similar cases were reported from all the other theaters where suppressive atabrine medication was in general use as a control measure for malaria. This syndrome has been observed most frequently in New Guinea and adjacent islands and in Assam and North Burma; in other areas only small numbers of cases have occurred.

In brief, this skin disease, which has acquired the name "atypical lichen planus," is characterized by various combinations of the following types of lesions: violaceous and erythematous hypertrophic lichenoid papules and plaques, frequently with a rough verrucous surface; violaceous and erythematous, oozing or scaling eczematoid plaques well demarcated in some cases and ill defined in others; flat squamous geographic plaques on the trunk, axillas and groins similar to tineal lesions; white, sometimes violaceous tinged, slightly elevated mucous membrane lesions identical with those seen in typical lichen planus; oozing intertriginous dermatitis in the groins, axillas and posterior surface of the ears; ecthymatous lesions; scaling and superficial fissuring of the lips, and scaling erythematous eczematoid dermatitis of the eyelids. In some cases the lesions are predominantly lichenoid, in others most of the plaques are eczematoid. Almost all patients have both violaceous hypertrophic lichenoid plaques and some form of cutaneous eczematoid reaction. During the course of their disease a considerable number of these patients have acute, "explosive" generalized exacerbations manifested by oozing eczematoid dermatitis having a predilection for the flexors, groins, axillas, extremities and neck. Such exacerbations resemble exfoliative dermatitis, and a few of these patients may develop a secondary exfoliative dermatitis which is as severe as the cases of primary exfoliative dermatitis. The seriousness of such a state and the need for expert management of these patients cannot be overemphasized.

Usually the disease is characterized by onset of localized violaceous or erythematous eczematoid plaques on the dorsal surface of the hands or feet, lateral surface of the neck or elsewhere, followed by generalization of the lesions with subsequent appearance of the lichenoid plaques and mucous membrane lesions. The distribution of the lesions is variable. Any part of the cutaneous surface may be involved, but there is a predilection for the legs, forearms, dorsal surface of the hands and feet, face, buttocks, V of the neck, genitalia, mucous membranes of the mouth, eyes and eyelids. Residual effects and lesions which develop in many cases later in the course of the disease include atrophy, hyperpigmentation (melanin) and depigmentation, diffuse follicular accentuation over the upper part of the back, shoulders and extremities, changes in the nails, motheaten patchy alopecia and disturbance in the sweating function.

For practical purposes it is necessary to describe, along with the syndrome just described, a characteristic type of eczematoid dermatitis which also has occurred in persons taking suppressive atabrine. This skin disease is characterized by bilateral symmetrical violaceous tinged, vesicular, eczematoid and oozing plaques involving the hands, arms, feet, legs and sometimes other parts of the body. Secondary pyogenic infection is common. The nail bed and skin of the nail folds are usually involved, frequently resulting in exfoliation of the nails without true suppurative paronychia. With experience, on clinical grounds one can in most cases distinguish between this eruption and other forms of eczematoid dermatitis. Tentatively the term "symmetrical eczematoid dermatitis" has been used to differentiate this disease from other forms of eczematoid dermatitis.

It does seem advisable to make a sharp distinction between the so-called "atypical lichen planus" and the "symmetrical eczematoid dermatitis" syndromes. From a broad point of view it would seem that all these patients have either a lichenoid cutaneous reaction or an eczematoid cutaneous reaction or the combination of the two types. A small percentage of the total group have lichenoid lesions alone, a larger group have a combination of lichenoid and eczematoid lesions and a still larger group have eczematoid lesions which are not accompanied by lichenoid lesions.

This article is printed simultaneously in the Bulletin of the U. S. Army Medical Department. It concerns cutaneous reactions attributable to the use of suppressive atabrine, especially the so-called "atypical lichen planus" syndrome. Contributions are appearing in medical periodical literature on this subject. The report represents the views of a considerable number of army medical experts who have seen the condition in many different areas. It was prepared by Major Clarence S. Livingood (consultant in dermatology) and Col. Francis R. Dieuaide, (chief, Tropical Disease Treatment Branch) Medical Consultants Division, Office of the Surgeon General.

The regular occurrence of specific types of cutaneous reactions such as the lesions aforementioned renders it necessary to consider one or more drugs as the essential etiologic factor. It is a well known fact that some types of skin changes are more frequently attributable to drugs than are others and that certain drugs have a special capacity to produce characteristic reactions. Thus, cutaneous sensitivity to sulfathiazole usually results in skin lesions characteristic of toxic erythema, erythema multiforme and erythema nodosum; bromides tend to produce acneiform eruptions and ecthyma-like or ulcerative dermatoses; arsenicals produce localized and generalized eczematoid eruptions and exfoliative dermatitis as well as many other types of lesions; quinine has a tendency to produce eczematoid eruptions and exfoliative dermatitis. This list could be extended almost ad infinitum because causal drugs and the dermatologic manifestations which they produce are encountered in almost limitless numbers and varieties.

The following general principles in regard to drug eruptions are included here because they are pertinent to the lichenoid and eczematoid cutaneous reactions under discussion: (*a*) in the majority of drug eruptions the untoward effects are due to a peculiar susceptibility or allergy on the part of the skin of the particular individual; (*b*) the cutaneous changes elicited by drugs may range from mild pruritus to severe and sometimes fatal eruptions; (*c*) if a drug eruption is suspected, all drugs not essential to the patient's health or life should be discontinued; (*d*) improvement following removal of the causal drug may not occur for several weeks; (*e*) many patients may have periods of refractoriness, during which exposure to the causal drug does not reproduce the symptoms; (*f*) it is important to examine all patients with drug eruptions for damage to the hemopoietic system, liver and kidneys; (*g*) patients who have had cutaneous reactions to drugs, especially eczematoid lesions, are likely to have similar reactions to other related drugs or even other allergens, both endogenous and exogenous; (*h*) skin tests usually are of little or no value in the attempt to discover the causal drug, although the use of patch tests in purely eczematous eruptions may be an exception.

In regard to the lichenoid and eczematoid reactions under discussion, reports of general army experience available at the present time indicate that atabrine is the essential etiologic factor (reported first by Lieut. Col. Charles Schmitt and Major Thomas Nisbet). The mechanisms resulting in the lichenoid reaction and the eczematoid reaction are probably different. For example, it has been observed in one carefully controlled series of cases at Moore General Hospital (Major James Bazemore, Capt. Herbert Johnson, Capt. Elmer Swanson and Col. Joseph Hayman) that the time interval preceding exacerbations of eczematoid lesions is much shorter than is the case with the lichenoid lesions. The fact that the incidence has been so very much higher in New Guinea and adjacent islands and in Assam and North Burma suggests that climatic or geographic factors may play a contributory role in the causation. There is evidence which indicates that various forms of cutaneous trauma may contribute to the onset and localization of the lesions, particularly the eczematoid phase of the eruption. The sequence of events in many cases suggests that persons taking suppressive atabrine have a tendency to acquire chronic eczematoid dermatitis on contact with external allergens (such as certain jungle plants) rather than self-limited contact dermatitis, which is the usual course of events. It appears that cutaneous reactions are more frequent in persons who have been taking atabrine in doses above the recommended suppressive amount (0.7 Gm. per week). It should be emphasized that the incidence of these cutaneous diseases has been relatively low, even in New Guinea. From the military point of view it has not constituted an important handicap.

In view of the fact that available evidence indicates that we are dealing with one complex, it is suggested that it would be best to group these cutaneous reactions attributed to atabrine under the one heading "atabrine dermatitis complex" and classify the various manifestations as follows:

a. Lichenoid dermatitis. b. Lichenoid and eczematoid dermatitis (a and b include cases heretofore referred to as "atypical lichen planus").

c. Eczematoid dermatitis (includes cases heretofore referred to as "symmetrical eczematoid dermatitis").

d. Exfoliative dermatitis secondary to a, b or c.

The treatment of these conditions depends for the most part on early recognition of the trouble and discontinuation of atabrine. In many instances it is difficult to decide whether or not a given case of eczematoid dermatitis is due to atabrine. It is necessary to study such cases carefully, with careful observation after withdrawal of atabrine and possibly cautious trial readministration of the drug (do not attempt readministration of atabrine to a patient who has had exfoliative dermatitis or a severe generalized eczematoid exacerbation). It is necessary to keep in mind the general principles in regard to drug eruptions which were previously outlined. When possible, such patients should be seen by a competent dermatologist and every effort should be made to rule out other etiologic factors. Parenteral administration of penicillin is indicated in patients with secondary pyogenic infection. Local treatment should be bland and nonirritating and should consist of preparations such as 1:9,000 potassium permanganate soaks, Burow's solution soaks, 5 per cent aqueous solution of tannic acid spray for oozing intertriginous sites and application of borated cold cream if a grease is indicated. Preparations such as salicylic acid ointment, tincture of iodine and sulfonamide ointments should not be used. Arsenicals and bismuth have been tried in some cases without affecting the course significantly; they should not be used. Superficial x-ray therapy, if indicated, should be used only under the direction of a competent dermatologist and in small doses (not more than 75 roentgens and not to exceed a total of more than 375 to 450 roentgens). At least some of these patients have some degree of light sensitivity. Therefore, exposure to sunlight should be avoided and ultraviolet light therapy should not be used. All patients should be studied from the general medical point of view, including studies of blood, serum proteins and liver function. Therapeutic agents such as plasma, liver extract, multiple vitamins and intravenous glucose should be used when indicated.

The prognosis varies from one person to another. In general it seems excellent, especially if the patient is hospitalized early in the course of the disease and the therapeutic measures outlined are initiated promptly. The lichenoid lesions disappear slowly, but they do not tend to recur; the eczematoid phase of the erup-

tion may disappear rapidly, but it tends to recur and is responsible for the prolonged disability which occurs in some cases. In general, recovery is a matter of weeks and months.

Residual hyperpigmentation, depigmentation and atrophy at the sites of lesions become less pronounced as time goes on and the hypohidrosis which occurs in many patients also improves spontaneously. The course is usually prolonged in all cases of exfoliative dermatitis because of frequent exacerbations. It should be noted that these patients have not been followed for a sufficient length of time to justify final statements in regard to the prognosis of these cutaneous reactions.

Another major type of cutaneous reaction which has been attributed to atabrine is primary exfoliative dermatitis not secondary to the lichenoid-eczematoid syndrome. This is characterized by acute fulminating exfoliative dermatitis, demonstrably associated with true hypersensitivity to atabrine. It is in every respect similar to exfoliative dermatitis due to other agents such as arsenicals. This type of cutaneous reaction to atabrine is believed to be associated with atabrine much less commonly than with quinine. Hypersensitivity of this degree constitutes a dangerous state in either instance.

In rare instances aplastic anemia, other severe blood dyscrasias (such as agranulocytosis) and severe acute hepatitis have occurred in association with the lichenoid-eczematoid syndrome and with exfoliative dermatitis. Similar cases have also been observed rarely in persons taking atabrine who do not develop skin disease. Attention is called to the fact that the fatality rate in these cases of aplastic anemia and of hepatitis has been almost 100 per cent. The relationship between this condition and the skin disease is not clear, but the association is striking. (As regards hepatic disease, in areas where infectious hepatitis is common the exclusion of this infection may be extremely difficult.)

Bluish pigmentation deposits of characteristic distribution involving the hard palate, nail beds, epiglottis and tracheal rings, and rarely other parts of the body, also have been reported in patients who had been taking suppressive atabrine for long periods of time. It is not thought that this bears any relation to the lichenoid-eczematoid reaction, although the two conditions sometimes occur in the same patients. Also, in rare instances, cases of urticaria have been attributed to atabrine.

Information about the cutaneous reactions described has been collected from all quarters and analyzed. Further data are constantly being gathered. Carefully planned studies designed to clarify the significance of these dermatoses and the role of atabrine and other suggested factors in its causation are being performed both in the United States and overseas. Medical officers who have been stationed in the theaters where these reactions have occurred as well as those who have seen these patients in general hospitals in the Zone of the Interior have submitted articles for publication which have now been released.

The fact that psychologic disturbances occasionally appear in association with the use of atabrine is well known. When unduly large doses are given, and rarely with moderate doses, for clinical treatment, toxic delirium, such as occurs with bromides, may develop. The psychologic disturbance may take the simple form of brief periods of confusion. Such manifestations have been reported occasionally in connection with suppressive medication, especially when unauthorized high doses have been taken.

Many untoward effects have been attributed to atabrine which undoubtedly have no connection with the drug, as in the instance of the rumor that it affects the sexual powers.

In accordance with par. 7, AR 40-215 (25 April 1945), when after thorough study it is concluded that an individual is definitely sensitive to atabrine (or quinine), as in the case of other drugs, appropriate entry should be made on W. D. A. G. O. form 8-117 (Immunization Register).

Quinine is available for the treatment of persons who are known to be sensitive to atabrine or to be seriously intolerant of the drug. It should not be used, however, for units or organizations as a whole.

SUMMARY

In the light of these considerations and on the basis of other data which cannot be presented in a communication of this type, the following general statements regarding atabrine and reactions attributable to atabrine are submitted for the information and guidance of all concerned:

1. The military value of atabrine in suppressing vivax malaria and curing falciparum malaria far outweighs untoward effects which have been attributed with reason to the use of the drug.

2. Suppressive doses of atabrine greater than 0.7 Gm. per week should not be employed routinely. This amount has been shown to provide adequate protection against clinical attacks of malaria, provided "atabrine discipline" is strictly enforced. In clinical treatment of malarial attacks with atabrine, routine dosage should not exceed 2.8 Gm. in seven days.

3. Atabrine suppressive medication should be discontinued promptly and atabrine should not be given for clinical treatment when persons develop atypical lichen planus, unexplained chronic eczematoid dermatoses, unexplained toxic erythematous eruptions, exfoliative dermatitis, severe leukopenia, agranulocytosis and aplastic anemia, acute hepatitis (not including disturbances believed to be due to malaria) or toxic psychoses which can be reasonably attributed to atabrine after careful clinical study.

4. It should be remembered that drugs other than atabrine, such as the sulfonamides and arsenicals, may be harmful to persons with the conditions mentioned.

5. Caution should be exercised in attributing disease conditions to atabrine until careful and complete studies have been made over a period of time to establish such relationship. Because of the widespread use of atabrine, its administration inevitably coincides with many diseases with which the drug has no connection. Even if a connection is established between atabrine and a given untoward effect, its significance relative to the military value of atabrine requires evaluation. It should be remembered that, since the use of atabrine became widespread, clinical attacks of falciparum malaria have been almost eliminated and deaths from malaria have been extremely rare. There is no question of the general superiority of atabrine over quinine, both for suppression and for clinical treatment.

Clinical Notes, Suggestions and New Instruments

PENICILLIN OINTMENT IN THE TREATMENT OF IMPETIGO NEONATORUM

EDWIN L. KENDIG JR., M.D., AND RUSSELL H. FISKE, B.S.
RICHMOND, VA.

Wartime conditions, with overcrowding of nurseries and inadequate personnel, have caused impetigo neonatorum to assume new importance. This infection is always troublesome and may be followed by furunculosis, erysipelas, cellulitis or general sepsis.

In this study 14 cases were treated with penicillin ointment, with satisfactory results (tables 1 and 2).

METHOD OF TREATMENT

The penicillin ointment used in this study was always freshly made. It was prepared by taking up a stock solution of penicillin in a eucerite type base (5 per cent by weight) and dispersing in White Ointment U. S. P. XII. For the first part of the study the ointment was made with 250 units of penicillin to each gram, but this was later increased to 333 units to each gram.

TABLE 1.—*Results in Patients Treated with Ointment Containing 250 Units of Penicillin per Gram*

Patient	Severity of Infection	New Lesions After Treatment Begun	Recurrence
B. H.	++	24 hrs.	None
B. D.	++	24 hrs.	None
G. B.	++	None	None
G. R.	+++	48 hrs.	None
G. B.	++	None	None
B. H.	++	None	1 week
B. K.	++	None	1 week

+ = 1 to 3 blebs; ++ = 3 to 10 blebs; +++ = more than 10 blebs.

TABLE 2.—*Results in Patients Treated with Ointment Containing 333 Units of Penicillin per Gram*

Patient	Severity of Infection	New Lesions After Treatment Begun	Recurrence
B. L.	+	None	12 days
G. A.	+	None	None
B. S.	++	None	None
B. H.	+++	None	None
B. H.	++	None	None
B. K.	++	24 hrs.	None
B. P.	+++	None	None

+ = 1 to 3 blebs; ++ = 3 to 10 blebs; +++ = more than 10 blebs.

Each new case of impetigo neonatorum was strictly isolated. The exfoliated membrane of epidermis, which constitutes the bleb, was completely removed by means of alcohol on cotton. Penicillin ointment was applied generously to the moist red base which remained and to the surrounding area of skin. The ointment was applied at least twice daily. No bath was given until the lesions were completely dry. At the time of discharge from the hospital, the mother was instructed to follow the same routine for at least one week, or until there were no lesions present.

RESULTS

In the 14 cases in this series there were no new lesions after the treatment had been in effect for forty-eight hours. After a maximum of three days all the lesions appeared to be dry and healed. In 3 instances, however, there was a recurrence of the condition after the patient had been home from the hospital more than one week. There was no apparent correlation between these and the severity of the disease, as 2 of the cases were of only moderate severity and the other was mild. It should be noted that each recurrence was after treatment had been discontinued and baths had been started.

COMMENT

In many clinics sulfonamide ointments have supplanted 1 per cent aqueous gentian violet, 3 per cent ammoniated mercury ointment and other agents formerly [1] used in the treatment of impetigo neonatorum. Treatment by this method is admittedly more effective, but the danger of sensitization [2] of the patient makes its use inadvisable. Penicillin ointment, on the other hand, is not only effective but also without danger of side effects. Impetigo neonatorum is a hospital disease, and penicillin ointment can and should be freshly prepared in the hospital pharmacy.

414 West Franklin Street.

Help was rendered by Miss Elma Sunday and others of the nursing staff.

From the Departments of Pediatrics and Pharmacy, Medical College of Virginia Hospitals.

ODOROUS WOUNDS AND FISTULAS

W. WAYNE BABCOCK, M.D., PHILADELPHIA

Fetor from intestinal and urinary fistulas or from incontinence, suppurating wounds, necrotic tumors or gangrene permeates the room or ward, to the great distress of other patients and the disgust of attendants and visitors. The odor clings to the clothing of those in the room, surrounds the diet tray and renders the food unpalatable, and seeps through the corridors of the hospital, suggesting that even modern hospitals have characteristically unpleasant odors. How often, as one passes down the hall, is one conscious that the patient in room 27 is either incontinent or has a urinary fistula, while the odor in the vicinity of 36 indicates that the occupant has a colostomy. In a distant, sterile operating room one may suddenly realize that a patient with an extensive burn has been brought to the floor for skin grafting. Even on opening the front door of a hospital I have recognized the stench from a patient with gas gangrene on an upper floor. Methods for overcoming these odors, apart from vigilant and untiring nursing attention, now difficult to obtain, apparently are not generally understood, or at least are not used. Perfumes or pungent antiseptics about the bed of the patient as a rule are undesirable and quite inadequate. The wick protruding from the bottle of a commercial deodorant is helpful and has a less objectionable odor but does not screen the source of the trouble, which is the patient's body and dressings.

There are two simple agents which I have found very effective in deodorizing the patient, his dressings and the bed coverings. If the wound, fistula or opening from which there is odorous emanation is covered with several layers of gauze or cotton saturated with a 1:300 to 1:500 aqueous solution of potassium permanganate, which has little odor, escaping gas, solid or liquid material may be entirely deodorized. All that is required is that the offensive area and discharge be completely covered, that the dressings remain wet and that the permanganate solution be reapplied from time to time, as it loses its deodorizing qualities by oxidation. The permanganate solution is a useful wound dressing and rarely irritates the skin or delays healing. However, it stains bed linen as well as the skin a dirty brown, which is not removed by ordinary washing but which may be decolorized by a solution of oxalic acid or other chemical, with possible detriment to the fabric. Hospital authorities therefore may have reason to object to the use of permanganate at the bedside.

Another potent deodorant, which does not stain fabrics, is bromine used in solutions of 1:500 to 1:2,000. The 1:500 solution has a pungent odor and may be irritating to sensitive

1. Holt, L. E., Jr., and McIntosh, Rustin: Holt's Diseases of Infancy and Childhood, ed. 11, New York, D. Appleton Century Company, Inc., 1940, p. 122.
2. Darke, R. A.: Sensitivity to Topical Application of Sulfathiazole Ointment, J. A. M. A. **124**: 403 (Feb. 12) 1944. Tobias, Norman: The Use and Abuse of Sulfonamides in the Treatment of Skin Diseases, South. M. J. **38**: 467 (July) 1945. Reports of the Council on Pharmacy and Chemistry: Dangers from the External Use of Sulfonamides, J. A. M. A. **128**: 1024 (Aug. 4) 1945.

From the Surgical Department of Temple University Hospital.

surfaces and the nasal mucous membranes. Such a strong solution is to be used only in extreme cases, although little odor of the bromine may pass through the outer dressings and bed coverings into the air of the room. Compresses wet with such a strong solution may be used to cover a gangrenous limb. Solutions of 1:1,000 to 1:2,000 may be applied on gauze or other absorbent dressings for days over the perineum or other odorous parts with little or no irritation of the skin. It is necessary to moisten the dressings from time to time, whenever the faint odor of bromine is lost, and when properly used the offensive odor or that of the chemical is hardly noticeable in the room.

The deodorant qualities of bromine I learned many years ago in visiting a laboratory for the commercial preparation of smallpox vaccine. In a large room there were many calves with abdomens covered with pustules, yet the air was free from unpleasant odor. The veterinarian in charge told me that bromine was the best agent he had found to eliminate the very objectionable odors from the calves, and of course the chemical was not applied to the animals.

This led me to the use of bromine solution on septic and offensive wounds. Not only is the odor immediately overcome, but sloughing wounds usually develop red firm granulations, become clean of necrotic tissue and heal rapidly. Offensive fistulas covered with layers of gauze or pads wet with weak bromine solution give little objectionable odor, the surrounding skin is not irritated and fabrics are not stained.

As bromine solution is decomposed by light and becomes colorless and inert, it should be kept corked in brown glass bottles.

3401 North Broad Street, Philadelphia 40.

Council on Physical Medicine

The Council on Physical Medicine has authorized publication of the following report. HOWARD A. CARTER, *Secretary.*

TECA TWO-CIRCUIT HYDROGALVANIC THERAPY APPARATUS NOT ACCEPTABLE

Manufacturer: Teca Corporation, 220 West Forty-Second Street, New York.

Now and then the Council on Physical Medicine is called on, in order to fulfil its assumed obligations to the medical profession, to investigate and render reports on devices or methods which have not been submitted to the Council if it considers such reports important to public health and welfare.

The Teca Hydro-Galvanic Therapy apparatus falls in this category. The equipment consists mainly of a galvanic generator with two independent circuits, each with its own milliameter, intensity control and polarity switch. One hundred and fifteen volt alternating current is rectified by a selenium rectifier. By means of a switch both circuits can be powered by an independent battery, if the operator desires to use direct current generated by a battery. The controls are arranged to permit one current, if the operator prefers, to be generated by a battery and the other current by the rectifier. The machine is claimed to be ground free, and treatments may be given in any enameled or porcelain bathtub or in four individual tanks for treatment of all extremities. The electrodes are made of solid carbon and are completely encased in wooden containers. The manufacturer believes that the apparatus is an improvement over older types of equipment for galvanic baths. The firm claims that the two circuit generator allows flexibility of electrode grouping and that a general as well as local treatment can be administered at the same time

The physiologic effects of the Teca Bath are said to be general body or general muscular stimulation, according to the type of current, and acceleration of metabolism and a slight lowering of blood pressure.

The clinical claims for the Teca Bath in published advertising matter include arthritis, rheumatism and allied conditions, neuritis, sciatica, neuralgia, chronic pelvic inflammations, parametritis, menstrual disorders, constipation and metabolic disorders such as obesity.

In the Council adopted article "Evaluation of Methods Used in Physical Therapy" (Handbook of Physical Therapy) it is recorded that results from physical therapeutic measures must be carefully evaluated and in order to evaluate the effects of physical therapy: "Observations with the particular form of treatment must be controlled and checked in a series of patients without the treatment. The number of observations must be so large as to minimize some of the disadvantages of random sampling." The evidence available, in the opinion of the Council, does not meet this criticism and therefore does not substantiate the therapeutic value of the Teca Bath (for the aforementioned reasons).

Other questionable points on which the evidence is not clear:

1. What is the therapeutic value of regrouping the circuits?
2. What is the therapeutic value of two independent circuits?
3. Why is it necessary to use one battery circuit and one alternating current supply circuit?
4. What is the chemical composition of the products used in the solution?

The Council on Physical Medicine voted not to include the equipment in its list of accepted devices because of the lack of critical therapeutic evidence to substantiate the claims made for the device.

The foregoing report was sent to the Teca Corporation prior to publication in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. The manufacturer disagreed with the report of the Council and requested that it be held in abeyance awaiting additional information.

The manufacturer presented the names of several physicians who had had experience with the Teca Bath. The Council solicited information from these physicians and asked for an account of their experiences with the product. The Council gave careful consideration to their replies but found no convincing evidence which would warrant a change in the decision of the Council.

After due deliberation, the Council voted to reaffirm its previous stand and not to include the Teca Two-Circuit Hydrogalvanic Therapy Apparatus in its list of accepted devices. The Council will reconsider the appliance without prejudice when adequate information is submitted.

Council on Foods and Nutrition

ACCEPTED FOODS

The following additional foods have been accepted as conforming to the Rules of the Council on Foods and Nutrition of the American Medical Association for admission to Accepted Foods.

GEORGE K. ANDERSON, M.D., *Secretary.*

PREPARATIONS USED IN THE FEEDING OF INFANTS (*See* Accepted Foods, 1939, p. 156)

Heinz Company, Pittsburgh.

HEINZ STRAINED VEGETABLES AND LAMB WITH MILK AND CEREAL contains lamb carcass, lamb broth, rice, potatoes, carrots, celery, onions, salt, milk, cornstarch and water.

Analysis (submitted by manufacturer).—Total solids 11.82%, total sugar as sucrose 0.88%, acidity as citric 0.08%, protein (N × 6.25) 2.06%, ether extract 1.35%, crude fiber 0.50%, ash 0.88%, salt, 0.58%, total carbohydrates other than crude fiber, by difference 7.05%, calcium 20.0 mg. per hundred grams, phosphorus 22.0 mg. per hundred grams, iron 0.36 mg. per hundred grams, copper 0.12 mg. per hundred grams.

Calories.—0.49 per gram, 14 per ounce.

Vitamins.—	I. U./100 Gm.	Mg./100 Gm.
Vitamin A	2,605	.....
Thiamine	.....	0.0167
Riboflavin	.....	0.0301
Ascorbic acid	.....	0.66

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SATURDAY, DECEMBER 15, 1945

THE HOUSE OF DELEGATES SESSION

The end of the war made possible a session of the House of Delegates of the American Medical Association in Chicago during the period from December 3 through December 5. Practically a full attendance assembled, with delegates from all the constituent bodies and from the scientific sections and with representatives of the councils and other official bodies of the Association. The addresses of the Speaker of the House, the President-Elect and the President and the reports of trustees and officers appear in this issue or have been previously published. These were referred to the reference committees of the House of Delegates, and the final actions taken will be included in the proceedings to be published in The Journal during this week and the weeks to follow.

The Board of Trustees referred to the House of Delegates the address of President Harry S. Truman and the Wagner-Murray-Dingell bill, which were recently discussed in The Journal. Among the most significant of all the actions taken by the House of Delegates was the adoption of the report of the Reference Committee on Legislation and Public Relations, under the chairmanship of Dr. Edwin S. Hamilton of Illinois, which defines the policy of the American Medical Association on these proposals. As might be expected, the House of Delegates expressed its opposition to federal compulsory sickness insurance as proposed by the Wagner-Murray-Dingell bill and also to the extraordinary proposals made by Senator Pepper in his bill for maternal and infant care.

Among the many problems considered by the House of Delegates, those of first importance related to the physicians still in military service and those now being discharged. By direction of the House of Delegates a new Committee on Military Service has been established which is to give careful consideration to all the communications that have been received from men in the service in order that the difficulties that have prevailed in this war may be overcome in any future emergency. The Committee on Postwar Medical Service is being charged with many of the problems of the returning medical veteran; the House of Delegates requested the Board of Trustees to develop the Bureau of Information on a permanent basis to intensify the activities now under way for aiding the returning veteran in securing internship or residency or graduate education and also with information as to suitable locations, licensure and similar matters that are to him of intimate concern.

Much of the time of the House of Delegates was occupied, particularly in the executive session, with the internal operations of the Association: the authority and functions of the Board of Trustees, of the Council on Medical Service and Public Relations and the work of various officers and bureaus in the headquarters office. By definite action the House of Delegates clarified these responsibilities.

Many resolutions were introduced in the House of Delegates relative to economic, social and scientific questions, all of which were referred to the appropriate reference committees and on all of which there were decisions. Especially significant were the action establishing a Section on General Practice as a permanent member of the scientific sections and the recommendation for a new by-law which will provide for two meetings of the House of Delegates each year, thus enabling the representative body of the Association to express promptly the policies of American medicine on most of the large problems that affect the medical profession.

The opening meeting for 1945 was marked by the inauguration of the new president, Dr. Roger I. Lee of Boston, whose address entitled "What is Adequate Medical Care?" was published as the leading article in The Journal last week. An unusual feature of this meeting was the presentation to Brigadier General Fred W. Rankin of the Distinguished Service Medal with a citation recognizing his military service. In making this presentation Dr. Roger I. Lee called attention to the pardonable pride which the Association takes in the fact that more than 60,000 physicians served in the armed forces. In introducing Brigadier General Noyes, who conferred the decoration, Dr. Lee said:

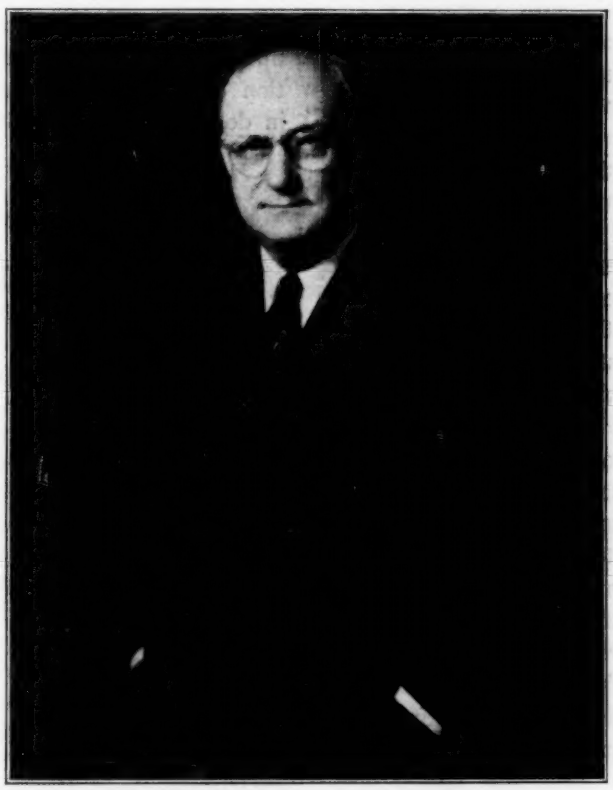
> Since the outbreak of World War II, 227 have been reported killed in action and 409 died in military service. Moreover, up to the first of December 1945 physicians have been distinguished by recognition with citations and medals in great numbers for a variety of distinguished services, which varied from organizations that have saved the lives of thousands to individual discoveries which have achieved worldwide recognition. The Bronze Star was conferred on 297 physicians for exceptional conduct, including bravery equal to that of the most courageous of fighters under the most hazardous of conditions. Physicians have at the peril of their own lives entered the hold of vessels burning and sinking at sea to care for the wounded and to bring them out. Physicians have gone into the midst of exploding

shells to administer first aid and blood transfusions to the wounded. The Silver Star has been given to 100 physicians, the Legion of Merit to 145 physicians, the Soldiers Medal to 46 physicians, the United States of America Typhus Medal to 34 physicians, the Medal of Honor to 3, the Navy and Marine Corps Medal to 17, the Navy Cross to 14. Among the miscellaneous citations have been the awarding of the Croix de Guerre, the Cross of the Knight Commander, the Italian Cross for War Merit, the Medal of Distinction, and other foreign decorations. And finally, the Distinguished Service Medal has been awarded to Col. James O. Gillespie, Major Gen. James C. Magee, Brig. Gen. Leon A. Fox, Brig. Gen. Percy J. Carroll, Major Gen. Norman T. Kirk, Major Gen. George C. Dunham, Brig. Gen. Joseph I. Martin, Brig. Gen. John A. Rogers, Capt. George B. Dowling, Brig. Gen. Malcolm C. Grow, Major Gen. Morrison C. Stayer, Rear Admiral William Chambers, Major Gen. Warren F. Draper, Major Gen. George F. Lull, Comdr. James J. Sapero and Capt. Emile G. Schuster.

The list of the members of the medical profession who have been decorated at war is at present far from complete. No doubt many others will yet receive decorations for remarkable accomplishments. Perhaps some of the names of those who have been recognized have been missed. Symbolic of all of these decorations, therefore, is the award made to Brigadier General Fred Rankin, a former President of the American Medical Association.

The election of officers brought to the Association as President-Elect Dr. Harrison H. Shoulders, Nashville, Tenn., for many years Speaker of the House of Delegates; as Vice President Dr. William R. Molony, Los Angeles, long a member of the House of Delegates from California; for the Board of Trustees three new members, Dr. John H. Fitzgibbon of Portland, Ore., Dr. James R. Miller of Hartford, Conn., and Dr. Dwight H. Murray of Napa, Calif. Dr. Olin West, for many years Secretary of the Association, was reelected unanimously, as was also Dr. Josiah J. Moore, the treasurer. Dr. Herman G. Weiskotten of Syracuse, N. Y., was reelected to the Council on Medical Education and Hospitals; Dr. Henry R. Viets, Boston, to the Council on Scientific Assembly, and Dr. Louis A. Buie, Rochester, Minn., to the Judicial Council. To the Council on Medical Service and Public Relations were elected Dr. Alfred W. Adson, Rochester, Minn., Dr. Walter B. Martin, Norfolk, Va., and Dr. Raymond L. Zech, Seattle.

The next annual session of the Association will be held in San Francisco, July 1-5, 1946. Plans were developed for the celebration of the centennial of the Association, which will be held in Atlantic City in 1947.



HARRISON H. SHOULDERS, M.D.

PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION

THE PRESIDENT-ELECT: DR. HARRISON H. SHOULDERS

On request of many delegates, Dr. Harrison H. Shoulders, Speaker of the House of Delegates since 1938, resigned his position at the opening of the elections and was thereafter nominated and elected to the position of President-Elect of the American Medical Association. From 1930 to 1938 Dr. Shoulders served continuously as a delegate from the Tennessee State Medical Association. He was elected Vice Speaker of the House of Delegates in 1935 and reelected in the two years following, becoming Speaker of the House in 1938. He was secretary of the Tennessee State Medical Association and editor of its *Journal* from 1927 to 1945. Dr. Shoulders, who is now 59 years old, is a native of Tennessee. Following study at the Potter Bible College in Kentucky he went in 1904 to the University of Nashville Medical Department, where he received the degree of Doctor of Medicine in 1909. He was married on Dec. 5, 1922, so that the day of his election to the presidency of the American Medical Association fell, by a fortunate coincidence, on his twenty-third wedding anniversary.

Following his internship at St. Thomas Hospital in Nashville he became resident surgeon at the Forts Infirmary, which position he held until 1912. He then became assistant secretary and executive officer of the Tennessee State Department of Health and held this position until 1917. In 1919 he went for postgraduate study to the New York Postgraduate Hospital, after which he was resident surgeon at St. Luke's Hospital and the Hospital for Ruptured and Crippled in New York City through 1921. He served as a captain in the Medical Corps of the U. S. Army overseas from 1917 to 1919. He was certified as a member of the Founders Group by the American Board of Surgery; he is also a Fellow of the American College of Surgeons, is assistant professor of clinical surgery at Vanderbilt University Medical School and assistant visiting surgeon at Vanderbilt University Hospital, was an organizer and served as first president of the Nashville Surgical Society and has written many articles on surgery in the medical literature.

The service of Dr. Harrison H. Shoulders to American medicine has been distinguished by an intense belief in the spiritual mission of the physician as a healer. In his addresses to the House of Delegates he has emphasized constantly the high ethical purpose of medical practice and the dedication of the physician to his profession.

STUDIES ON STREPTOMYCIN IN MAN

Intravenous injection of a single dose of 600,000 units of streptomycin in man, according to Zintel and his co-workers,[1] was followed by a concentration of the drug in the blood which decreased at a more or less uniform rate for six hours. Fifteen minutes after administration the average blood streptomycin level was 32.8 units. At the end of six hours a small amount of streptomycin, 4.9 units per cubic centimeter, was still detectable in the blood in the majority of instances. When the same amount of streptomycin was administered as a single dose subcutaneously, the maximum blood level was not attained until two or three hours later. An additive effect was obtained when the drug was administered every three hours. When 3,000,000 units of streptomycin in 3,000 cc. of a 5 per cent glucose solution was administered daily by continuous intravenous infusion, the blood streptomycin levels usually varied between 20 and 60 units of streptomycin per cubic centimeter of blood. The authors administered streptomycin orally at the rate of 1,000,000 units a day to 6 patients and found that only occasionally was there any streptomycin in the blood, and then in minimal amounts, namely 1 to 6 units per cubic centimeter of blood. Most of the drug was eliminated in the feces. Apparently streptomycin passes through the gastrointestinal wall with difficulty, since little appears in the blood when given orally and only small amounts are found in the gastrointestinal tract when administered intravenously. Anderson and Jewell [2] did not detect any streptomycin in the serum at any time after oral administration of 600,000 units of streptomycin dissolved in 100 cc. of tap water.

Zintel and his co-workers found that streptomycin, when administered intravenously, subcutaneously or intramuscularly, is excreted largely in the urine. The highest urine concentration of the samples taken three hours after the injection of 600,000 units of streptomycin was 520 units per cubic centimeter. Following parenteral injection the drug was found to be distributed throughout most body fluids, such as blood, urine, ascitic fluid, pleural fluid, aqueous humor, vitreous humor, amniotic fluid and bile. Small amounts of the drug appeared in the spinal fluid in healthy persons. These authors found no evidence of either hepatic or renal damage from administration of a single massive dose of streptomycin. Anderson and Jewell, in their studies on man, obtained much the same results. They found that the curves of the serum concentrations of the drug after intramuscular or intravenous injection did not differ significantly except during the first few minutes after injection. They also found that intrathecal administration of streptomycin in doses up to 20,000 units does not produce signs of meningeal irritation. With doses of 10,000 to 20,000 units an appreciable concentration of the drug can be maintained in the cerebrospinal fluid for at least twenty-four hours. Serious toxic reactions did not follow the injection of single doses of streptomycin in amounts up to 600,000 units or after the continued administration of the drug for periods of two to three weeks in doses totaling 2,725,000 to 18,150,000 units.

1. Zintel, H. A.; Flippin, H. F.; Nichols, Anna C.; Wiley, Marjorie M., and Rhoads, J. E.: Studies on Streptomycin in Man, Am. J. M. Sc. **210:** 421 (Oct.) 1945.

2. Anderson, D. G., and Jewell, Marjorie: The Absorption, Excretion and Toxicity of Streptomycin in Man, New England J. Med. **233:** 485 (Oct.) 1945.

Current Comment

DR. GEORGE R. MINOT RECEIVES THE DISTINGUISHED SERVICE MEDAL

To the list of eminent physicians on whom the Distinguished Service Medal of the American Medical Association has been conferred, the House of Delegates at its meeting in 1945 added the name of George Richards Minot. His contribution to our knowledge of the causes and methods of control of pernicious anemia has been recognized throughout the world. The blood is unquestionably the most important of all the tissues of the body. Once every person who developed pernicious anemia died of that disease. Today, by the discovery made by George R. Minot and his associates, those with pernicious anemia are given years of life in which they live to all intents and purposes as normal human beings. This great discovery opened a new pathway into the field of research on blood, along which great numbers of investigators have traveled to build higher and higher the structure of medical science. The significance of Dr. Minot's discovery is perhaps best explained in the following paragraph from his writings:

> Dietary deficiency may arise not only because of an improper intake of one or more substances required by the body but also because established disease may prevent the formation, absorption or utilization, or cause abnormal loss from the body, of necessary substances. The effects of extra demands of organisms are always to be reckoned with. The physiological strain of child bearing requires dietary factors to be often much greater than the standard requirements for women. Moreover, since the material diet in pregnancy and lactation inevitably affects the well being of the infant, the health of the whole population depends to a greater or less extent on the nutrition of the mothers. Fundamental research bearing on nutrition in such fields as chemistry, as well as practical applied studies, offers a basis endeavor for better public health. There are today throughout the world multiple opportunities for the prevention of many sorts of disorders by better nutrition. The partaking of proper food is excellent preventive medicine and upon it depends the integrity of man. Men with different types of training must seek for more information on nutrition and carry forward the work so that the ultimate goal will be nearer for those who follow us.

Dr. Minot has been previously honored with honorary degrees from many universities and medical societies, with the Kober gold medal of the Association of American Physicians, the Cameron prize of the University of Edinburgh, the gold medal of the National Institute of Social Sciences, the gold medal and award of the *Popular Science Monthly*, the Moxon medal of the Royal College of Physicians, London, the John Scott medal of the city of Philadelphia, the gold medal of the Humane Society of Massachusetts and, together with William P. Murphy and George H. Whipple, the Nobel prize in medicine for 1934. The Distinguished Service Medal of the American Medical Association is thus added to many other distinctions given by the world to a great investigator.

ELECTRICAL TRANSCRIPTIONS LIST AUGMENTED

On page 1111 of this issue of THE JOURNAL appears an announcement of another series of electrically transcribed radio broadcasts available for local medical societies from the Bureau of Health Education. The new series deals with mental hygiene in terms of everyday living problems as indicated by its title, "Why Do You Worry?" The material was prepared by psychiatrists and the program is summarized by them, but it is not psychiatric in character or approach. It is a simple sensible program on adjustments to everyday living problems with suggestions of how and when psychiatric medicine can be of aid. This is the first of several series now being planned dealing with special fields of medicine. Programs in the field of pediatrics are now under consideration. At the same time the Bureau has dropped a series under the title "American Medicine Serves the World at War," which has lost its timeliness with the cessation of hostilities. The discontinuance of this series offers the first opportunity to estimate the service rendered by transcriptions in relation to cost. Eliminating general overhead and intraoffice costs and based entirely on the cost of master records and transcriptions, the preparation and lending of this series for six hundred and eighty local broadcasts represented a cost per individual broadcast of $1.33. There is no way of estimating the local audience, but at the minimum this would seem to be an economical way of reaching the people. With the addition of programs in mental hygiene and the elimination of strictly wartime recordings there remains a transcription library available for local medical societies of ninety-five separate programs covering emergency situations in the home, communicable disease topics, public health, personal health in middle years, living and liking it, mental hygiene, summer health suggestions, and special material for elementary school children. The local response to the availability of these platters has been good, especially from the medical societies of Texas, Pennsylvania, Wisconsin and Arizona. There are many platters available for lending which would be far more useful on the air than on the stock shelves of the Bureau of Health Education.

SIMULATED BLOOD PRESSURE RESPONSES IN LIE DETECTOR TESTS

Instruments for recording changes in blood pressure, pulse and respiration have been used effectively in criminal investigations to determine whether or not the person being tested is telling the truth. The recordings of approximately 20 per cent of the subjects thus tested are too indefinite to permit the examiner to make a diagnosis of deception. Experiments conducted by Reid [1] have revealed that ambiguities in the blood pressure tracings are frequently induced by some type of unobserved muscular movements. He has demonstrated in experiments on himself that all the typical blood pressure responses of deception can be produced at will, and that recorded evidence of muscular movement is in itself a criterion of deception. The ambiguities in the recordings of the blood pressure may be accomplished by the use of muscular contraction or by muscular pressure. Reid believes that a percentage of these discrepancies in the blood pressure tracings may be the result of deliberate attempts on the part of the subject "to beat the machine." To eliminate this possibility, Reid has devised an instrument which consists essentially of a closed pneumatic system in which inflated rubber bladders placed under the forearms and thighs are connected to three separate tambour units, which permits the recording of any muscular exertion by the subject's feet, legs, arms and hands. The experiments with this device indicate that both muscular contractions and the application of pressure to skeletal muscles which can influence the blood pressure tracing may now be detected by new devices which also serve to locate the regions from which the muscular movements emanate. The experiments also reveal that not all subjects can influence their blood pressure curve by muscular action. The author believes that examiners will have a means of separating true patterns of deception from fraudulent ones with his technic.

TEACHING INSTITUTIONS AND ADJACENT VETERANS' HOSPITALS

Elsewhere in this issue (page 1100) appears an announcement of the details of the plans developed by the Veterans Administration for complete cooperation with teaching institutions and veterans' hospitals in the proximity. For the first time the opportunity exists for providing the veteran with the highest type of medical service through the use of the civilian physicians and also for developing the standards of medical care in veterans' hospitals by bringing them up to the qualifications necessary for internships and residencies. The medical profession should do its utmost to give the fullest possible cooperation to Major General Hawley and his associates in order that the fullest success may result. This is important primarily for the veterans who will be served but also for the advancement of medical science.

1. Reid, J. E.: Simulated Blood Pressure Responses in Lie Detector Tests and a Method for Their Detection, J. Criminal Law & Criminology including Am. J. Police Science **36**: 201 (Sept.-Oct.) 1945.

MEDICINE AND THE WAR

PLANS FOR COOPERATION BETWEEN TEACHING INSTITUTIONS AND VETERANS' HOSPITALS

Introduction

NOTE.—Following are the details of the plans of cooperation between teaching institutions and veterans' hospitals and also for the use of civilian practitioners in the care of the veteran. The description includes the appointments to be given to civilian physicians and the terms of their employment. There follow also letters that have been sent to the deans of medical colleges, who will be asked to cooperate fully in the development of the plan.—ED.

This is a statement of General Hawley's plan for the immediate future for the staffing of veterans' hospitals and for cooperation with teaching institutions. There will probably have to be some variations made in the plan for individual hospitals according to the necessities, but the plan should work if:

1. Those in charge of administration of hospitals want it to work;

2. There is cooperation between hospitals, medical schools and consultants appointed by the Surgeon General of the Veterans Administration.

The object of these changes is to give better care to individual patients by bringing into the veterans' hospitals the best trained men obtainable in civilian practice of medicine. This can be done so far as consultants are concerned by putting consultants on a basis which will allow them to devote part of their time to veterans' hospitals and part to their own private practice and teaching.

It is realized by the Surgeon General that it was the complete cooperation of the civilian doctor, fitted into his proper sphere of interest and ability in the Army, that made the service to the G. I. outstanding in the field of military medicine and surgery. It is planned that this same type of service will be continued in the Veterans Administration, the only difference being that neither the doctor nor the patient will be in uniform.

The Plan

There will be three classes of service.

Senior Consultants (senior consultants—present consultants).—This staff in most hospitals near teaching centers already exists and is functioning. There will be no change unless recommended by the local consultants to the Surgeon General and the manager of the hospital. However, senior consultants must be fitted into the general plan. If at present there are senior consultants that cannot be fitted into this plan except with difficulty, the present incumbents must be replaced.

Consultants (consultants—new consultants).—These men, who are essentially attending men but who under existing laws must be designated as consultants because there is at present no provision for attending men, are to be appointed by agreement of the local consultants appointed by the Surgeon General and the manager of the hospital. These men will be appointed immediately on recommendations of the local "deans' committees." They will be selected from the staffs of medical schools or recommended by local consultants and will be drawn at present from the ranks of discharged medical officers wherever possible; they will be men who have been certified by their respective boards; they will act as attending men act in civilian hospitals.

Consultants will be paid on a per visit basis, no two visits to be charged for on the same day, and their compensation will not exceed $6,000 per year, on an average monthly basis of $500. Their duties will be those expected of an attending physician in any university hospital. They will be assigned to their individual wards and will be responsible to the chief of service, clinical director or manager as may seem best in the administration of the individual hospital.

Ward Officers (ward officers—residents).—Under existing laws there is no provision for residents. Such men now must come in under civil service and meet necessary physical qualifications. Arrangements have been made for immediate appointment of applicants by local managers on the recommendation of approved local "deans' committees" after completion of necessary form 57. Such men may go to work immediately.

These men will be essentially residents and will be put on a rotating service in their respective specialties with the idea that they will have opportunity to prepare for their boards under consultants and senior consultants. Teaching institutions with which the veterans' hospitals are cooperating will be responsible for furnishing instruction in the basic sciences prescribed by various boards.

At present ward officers will be paid under civil service, starting at $3,640 a year, not including room and board. When the law is changed these men will be on a different financial basis, probably with lower pay but with room and board. Any acceptable ward officer at present on the service of a veterans' hospital associated with a teaching institution, who has given satisfactory service, may be placed in line for continuing training for his chosen board. Ward officers wishing to fit themselves for board examination should apply to their managers and consultants to the Surgeon General and shall be put in line for such training only on their recommendation.

Ward officers will be selected first from the ranks of discharged junior medical officers who wish to prepare for their boards in various specialties. Their services will be rotating services through all the subspecialties of medicine and surgery, including orthopedic surgery. After their first complete rotation they should be allowed whenever possible to specify their preference as to the subspecialty. These services can run as long as five years in veterans' hospitals. One year of this will be in basic sciences, part of which can be given within the veterans' hospital. Such branches as pathology frequently can be given entirely within the institution; physiology, anatomy, biochemistry and others will have to be given by medical schools associated with veterans' hospitals.

It is suggested that the receiving service be continuous with the ward service and that each specialty should be represented on the receiving service rather than having the latter completely separated from ward service as is done in some institutions. This will make for continuity of diagnosis and treatment.

Local medical authorities will be responsible for offering courses to men preparing for boards. In most cases these can be paid for under the G. I. Bill of Rights. For the next year these courses will have to be held in abeyance because of lack of ward officers and the inability of some schools to provide this instruction immediately. When the attending staff is appointed and the schools can show the Council on Medical Education and Hospitals that they are prepared to give courses in the basic sciences, the boards will be requested to give their approval of the institution as a postgraduate institution for teaching. I have already been assured by the boards of surgery and medicine that their full cooperation will be forthcoming.

Permanent Staff.—Where there already exists a chief of service who is competent, who has been giving good service and who is a member of a board, of the College of Physicians or of the College of Surgeons, it would seem best not to interfere with his status, at least at this time, if he is a man of ability and vision and approves of the development of the proposed plan. It is suggested that he choose one of his ward officers to act as his adjutant to help coordinate the various services being handled by the consultants, to assist them at various times as the chief of service may see fit. This will enable the adjutant to prepare for his board in his specialty. If, however, the professional qualifications of a chief of service so warrant, he may be promoted to a hospital not immediately connected with a teaching institution to raise its standards.

If this plan does not seem satisfactory because of incompatibility of some sort, and a senior consultant or a consultant can be found who will devote enough time to the service to coordinate it and run it more satisfactorily, it would be up to the local administration to work out the plan.

Modus Operandi for Appointing Incoming Staff of Various Grades at Veterans Administration Hospitals

Senior Consultants.—Senior consultants should be recommended by the "dean's committee" of the medical school affiliated with the veterans' hospital. This group of consultants now exists in most veterans' hospitals near medical centers. They will be appointed from outstanding men of professorial rank and will act as supervisory consultants to the manager, chiefs of staff and the staff of the hospital and will guide the teaching as well as the clinical service in the hospital. Their compensation will be fixed, as now, on the basis of the amount of time spent and the kind of work performed during that time.

Consultants.—These men are essentially attending men and will be selected from discharged medical officers who have held teaching positions in medical schools prior to military service. They should be Fellows of the American College of Surgeons or the American College of Physicians or specialists certified by one of the specialty boards. If they have not passed the second half of the board examination because their military service prevented this, they may be recommended by the "dean's committee" because of their past record; it is permissible to use them as consultants, since they will be coming up for the second half of the board examination within the next six months or a year.

The method of appointment is as follows: They shall be recommended to the manager of the hospital for a particular service, medical, surgical or other specialty. There shall be included with the recommendation a full record of their training and accomplishments, positions held, research work, publications and army service record. Chief medical officers should transmit recommendations to the Surgeon General of the Veterans Administration for attention of Director of Medical Personnel. Recommendations should be sent by air mail, and we have assurance that appointments will be made promptly and returned to the manager promptly so that these men may be put in service immediately.

Ward Officers.—These men are to be selected at present from the ranks of discharged medical officers whenever possible by application to the "dean's committee" with their application. The "dean's committee" shall classify these men A, B or C according to ability and attainments. After survey the local "dean's committee" will recommend to the managers for immediate appointment sufficient personnel to fill all services necessary for the proper care of patients and teaching desired in future veterans' hospitals. The manager in consultation with the "dean's committee" shall select for recommendation to the Surgeon General a number sufficient to fill all vacancies as necessary in the veteran's hospital.

It should be specified to applicants that nobody will be appointed who does not wish to prepare for one of the specialty boards, with the direct understanding that they will remain in the veteran's hospital on service until they have qualified for such board, if the medical school affiliated with the Veterans Administration hospital training is approved by such boards as a suitable place to give such training.

If any ward officer shall prove unsatisfactory, in the opinion of the manager of the hospital and the "dean's committee," he can be transferred to another medical service in the Veterans Administration which will not necessarily prepare him for board certification, and the "dean's committee" may refuse to recommend him for such board examination.

Any individual now on service at a Veterans Administration hospital may apply for complete training for his board through the manager to the "dean's committee," and the fact that he is on service in the veteran's hospital shall not prejudice in any way his appointment to a place which will prepare him for such board. It is, however, to be understood that in spite of excellent work in one department or one section of one department performed in the past, this does not release him from any part of the rotating residency plan or give him any preference over those who are entering from the outside. It will be within the province of the "dean's committee," however, to give him credit for work already done satisfactorily in the Veterans Administration hospital.

To expedite necessary appointments and to assure the immediate professional functioning of competent personnel, arrangements for appointment have been made in the following manner: The managers of local veterans' hospitals will have the authority to appoint and put to work immediately applicants recommended by the "deans' committees" as desirable and necessary for proper functioning of veterans' hospitals as grade A medical installations. The procedure is simplified so that such applicants on the completion of the proper forms may start without further delay. This latitude is allowed because applicants will be recommended by the aforementioned "deans' committees."

Letter No. 1 Sent to Deans of Medical Colleges

Under the new plan of the Acting Surgeon General of the Veterans Administration we expect to make arrangements with the medical schools of this country, which are located near veterans' hospitals, to utilize their faculties to augment and improve staffs at the veterans' hospitals.

I am enclosing herewith plan of future cooperation with teaching medical institutions and veterans' hospitals in the immediate proximity. This is a statement of the plan we intend to follow.

I am also enclosing the modus operandi of this plan.

I have been authorized by the Surgeon General to put this plan into effect and on the receipt of your consent to willingness to cooperate, orders will be sent to the manager of the hospital in your vicinity.

The method of appointment will be recommendation of the "dean's committee," a committee consisting of the dean of medical schools and any members of his faculty of professorial rank he may desire to appoint. These committees are to be the sole judges of the professional standards to keep in the hospitals under their professional supervision.

For the Acting Surgeon General:
For PAUL B. MAGNUSON,
Director of Research and Education.
MAJOR WILLIAM T. DORAN,
Assistant Director of Research and Education.

Letter No. 2 Sent to Deans of Medical Colleges

This is in answer to your very kind acceptance of cooperation with the veterans' hospitals in establishing new high grade professional services. The plan of organization and modus operandi you are probably familiar with by now.

May I say that it will be up to the medical schools to keep the standards of your hospital at a place in medical education which will warrant the approval of all the specialty boards in each department, and the hospitals will be passed individually by the specialty boards, not collectively. Your senior consultants will be your liaison officers between you and the medical service. They should first survey the hospital in consultation with the manager with the chiefs of various services.

Undoubtedly you will find some dead wood and it is imperative that dead wood should be eliminated wherever it is possible. The man who is interested and is a good doctor should be pushed onward. The man who is not interested except for the 4:30 bell should be eliminated. This service should not be cluttered up with uncooperative individuals, and that goes from the manager down. I will say to you personally that if the manager is not cooperative, I want to know it.

The appointment of these men, both as consultants and as residents, is simple. They can be put to work within a week from the time you recommend them by the following method. The manager of the hospital and the chief medical officer of the hospital have the right under the present Veterans Administration rule to put consultants on a fee basis at any time and as many as necessary for the proper staffing of the hospital and service to the patient. We have just arranged today for the appointment of the residents, who will be full time employees and must come under civil service, and an order has gone out to all hospital managers where the hospitals are located near teaching institutions that ward officers who are the equivalent of residents can be employed the day their form 57 is filled out and they can be put on the pay roll of the hospital, with one exception; that is, if their tables of organization are filled the manager should be directed to send telegraphic request to

this office for authority for temporary appointment pending organization, so that the manager cannot say to you that his quota is filled and thereby hold an undesirable man in service.

A fee basis consultant whose assignment has no reference to a time element may be appointed without limit as to fee. It is distinctly understood that in such appointments no specific time is involved. A nominal fee of $15 to $25 per visit could be set with no requirement as to specific number of patients that must be seen at each visit. This sum can be increased to any reasonable amount as the situation may require and, in the cases of senior consultants, compensation will be given commensurate with a scale equal to the time devoted to equivalent professional work.

If it is possible to appoint a competent physiologist as senior consultant, we would like to have him make rounds with the medical staff and the surgical staff once a week. His fee can be fixed by you by recommendation to the manager.

I am enclosing a form 57 for your information. It is the standard form used in civil service and can be filled out in a short time by your applicant for residency. Form 57 is available at all veterans' hospitals. To prevent ordering away through Veterans Administration channels all men appointed through recommendation of the "dean's committee" as ward officer residents, they should be specifically earmarked for such service so that they will not be confused with other full time personnel.

I am also enclosing sufficient professional qualification forms that are self explanatory.

I want you to know how these things can be done so that the manager cannot refuse to do them. If you have any trouble please call this office long distance or telegraph, addressing your call to Major W. T. Doran or to me, room 826 Veterans Administration Building.

For the Acting Surgeon General:
For PAUL B. MAGNUSON,
Director of Research and Education.
MAJOR WILLIAM T. DORAN,
Assistant Director of Research and Education.

ARMY

235TH GENERAL HOSPITAL OBSERVES FIRST ANNIVERSARY

The 235th General Hospital, which was activated at Camp Barkeley, Texas, Oct. 10, 1944, recently celebrated its first anniversary at Les Milles, near Marseilles, France. The 235th assumed command of the installation on Dec. 22, 1944 as a thousand bed unit. A total of 7,291 patients, including American, Allied and German prisoner of war personnel, were admitted during the period from December 1944 to VE day. American personnel comprised 2,644 of this number, of whom 1,567 were battle casualties. The primary mission of the 235th General Hospital is to service personnel of the large Calas staging area near Marseilles. It maintains a hospital of 1,000 beds with a patient census of more than 800 at present.

HONORARY FLIGHT SURGEON OF THE FRENCH AIR FORCE

Col. Paul A. Campbell, Chicago, recently received an award of wings as an honorary flight surgeon of the French Air Forces as a result of his work in aeromedical research. The presentation of the honorary wings was made by Gen. J. A. Clerc, Air Surgeon of French Air Forces, during a recent inspection visit at the School of Aviation Medicine, Randolph Field, Texas.

Colonel Campbell recently returned from the European theater, where as a member of an air staff team studying medical services of the German air force, he traveled through Germany compiling medical data for study by Air Force personnel. As director of research of the school since 1942, Colonel Campbell personally supervised and directed many projects which have been instrumental in increasing the efficiency performance and safeguarding the health of combat crews.

NEW COMMAND OFFICER AT BEAUMONT GENERAL HOSPITAL

Col. George W. Reyer was recently named the new commanding officer of Beaumont General Hospital, El Paso, Texas, replacing Col. George M. Edwards, who has retired. Colonel Reyer's medical department career began in 1917, when he was commissioned in the Medical Corps Reserve. His experience with army hospitals started in Arizona and included Manila and Corregidor in the early twenties and Italy in World War II. In recognition of his work in Italy, as the head of the 300th General Hospital, Colonel Reyer received the Commander of the Cross of the Crown of Italy from the Italian government and the "Wreath of Merit" award.

165TH STATION HOSPITAL COMMENDED

The 165th Station Hospital was recently commended by Lieut. Gen. Robert L. Eichelberger, U. S. Army, commanding general of the Eighth Army in the Philippines, who stated, in the citation, "It is with great pleasure that I commend the 165th Station Hospital for its superior performance and outstanding devotion to duty during operations against the enemy from Dec. 26, 1944 to June 30, 1945. The untiring effort and high degree of professional skill evidenced by all officers and enlisted men have contributed materially to the alleviation of suffering of the wounded and the survival of many who were critically wounded. The inspiring manner in which the 165th Station Hospital has carried out its mission reflects great credit on the Medical Department and on the military service as a whole."

1,250,000 MEN GIVEN PHYSICAL EXAMINATION IN OCTOBER

According to a recent release from the War Department, more than 1,250,000 men were physically examined during the month of October before being discharged from the Army. Major Gen. Norman T. Kirk, Surgeon General of the Army, stated that every man released from the service will be given the ultimate medical care before returning to civilian life. He also pointed out that, in order to speed demobilization, the complete physical check on the average soldier is performed by eight doctors in one hour, provided the man has no ailment.

ARMY AWARDS AND COMMENDATIONS

Colonel Otis O. Benson Jr.

An Oak Leaf Cluster to the Legion of Merit was recently awarded to Col. Otis O. Benson Jr., formerly of Tower, Minn., at present assigned as Air Surgeon for the AAF Center in Orlando, Fla. The citation stated that "Colonel Benson was the key man responsible for welding the medical section of the 15th Air Force into an integral, efficient organization. During a very important phase of the Italian-European operation, when it was of highest importance to carry on an all-out aerial war from highly malarial and disease-ridden areas, he initiated methods of prevention and control which soon brought the health of the 15th to an exceptional standard." Colonel Benson has also been awarded the Bronze Star and the Air Medal. He graduated from Rush Medical College, Chicago, in 1930 and entered the service July 31, 1931.

Captain Harold N. Cole Jr.

Capt. Harold N. Cole Jr., formerly of Shaker Heights, Ohio, was recently awarded the Bronze Star "for meritorious service in connection with military operations against the enemy at Cebu, Philippine Islands, from March 26 to April 5, 1945. When assaulting companies suffered a number of casualties due to the strong enemy resistance and fortifications, Captain Cole, although ill with yellow jaundice, refused to leave the battalion aid station. A number of times Captain Cole went forward with the assault companies under intense fire of the enemy so that he could give aid to the men as they were wounded. Captain Cole's expert care in giving aid to the wounded men saved many lives, and his being on the front lines giving aid was inspirational to all the men of the assault companies. Captain Cole's devotion to duty, disregard for his own safety and efficient treatment of the wounded men were in keeping with the high

traditions of the Medical Corps." Dr. Cole graduated from the University of Pennsylvania School of Medicine, Philadelphia, in 1942 and entered the service July 3, 1943.

Captain Emanuel Goldstein

Capt. Emanuel Goldstein of Plainfield, Iowa, was recently awarded the Purple Heart and the Presidential Unit Citation for service with the 22d Infantry Regiment. In November 1944 he was awarded the Bronze Star for "heroic achievement in connection with military operations against an enemy of the United States in the vicinity of Bucher, Germany, in September 1944. At the time when enemy artillery shells were falling within 40 feet of a self-propelled gun, Captain Goldstein, battalion surgeon, led a group of men to the tank destroyer in which a seriously wounded man was wedged. From an unprotected position in the turret of the vehicle, Captain Goldstein directed the safe removal of the wounded man. He then administered medical aid, which undoubtedly saved the man's life. The courage, calmness and devotion to duty displayed by Captain Goldstein are in keeping with the highest traditions of the military service." Captain Goldstein was also awarded the Oak Leaf Cluster to the Bronze Star "for heroic achievement in connection with military operations against an enemy of the United States in the vicinity of Grosshan, Germany, Nov. 29, 1944. While reconnoitering the area near a forward observation post for an aid station location, Captain Goldstein heard the cries for aid from two men wounded in a motor bombardment. At great personal risk he ran to them, administered immediate emergency treatment and carried them to a nearby road, where he had them evacuated to the aid station. While enemy artillery and motor shells were bursting close by, he administered blood plasma, which probably saved their lives. The courage and devotion to duty displayed by Captain Goldstein were instrumental in saving two lives and reflect credit on himself and the military service." Dr. Goldstein graduated from the State University of Iowa College of Medicine, Iowa City, in 1941 and entered the service July 8, 1942.

Major Thomas H. Pennock

The Bronze Star was recently awarded to Major Thomas H. Pennock, formerly of Wilmington, Del., "for meritorious service from April 15 to May 5, 1945 in southern Germany. During this period Major Pennock was assigned the mission of coordinating the medical services for an attached cavalry reconnaissance group in addition to the organic divisional cavalry reconnaissance squadron. Those organizations functioned as a separate combat command and moved rapidly, covering large areas, bypassing strong points of resistance and penetrating as deeply as possible into enemy territory. For this reason evacuation of wounded was necessary through enemy territory and frequently over long distances under very adverse conditions. In spite of these difficulties every wounded man in this organization received prompt medical care, in large measure due to Major Pennock's efforts. Frequently drawing enemy fire and crossing hostile territory, Major Pennock made daily personal contact with all elements of his command and by judicious and resourceful methods so employed the facilities at his command that wounded personnel were treated and evacuated promptly. By conserving the fighting strength of the aforementioned units Major Pennock has rendered meritorious service to this organization." Dr. Pennock graduated from Hahnemann Medical College and Hospital of Philadelphia in 1941 and entered the service Aug. 1, 1942.

Major Karl V. Larson

The Bronze Star was recently awarded to Major Karl V. Larson, formerly of Machias, Maine, who was cited "for meritorious service in connection with military operations against the enemy from June 18, 1944 to May 9, 1945 in France and Germany. Throughout this extended period of combat operations Major Larson demonstrated exceptional professional skill and judgment in performance of his duties as division artillery surgeon. Untiring in his efforts to maintain the physical condition and ever alert to guard against mental fatigue of the members of the division artillery units, his aggressive supervision and insistence on simple measures to prevent disease were largely responsible for the excellent health of the command. Due to his expert guidance, nonbattle losses were negligible even during the rigorous Alsatian winter campaign, and his activities contributed greatly to the battle efficiency of the organizations under his medical supervision. The unstinting fidelity to duty displayed by Major Larson reflects great credit on the armed forces of the United States." Dr. Larson graduated from Albany Medical College, New York, in 1940 and entered the service Jan. 15, 1942.

Major Vance H. Marchbanks Jr.

Major Vance H. Marchbanks Jr., formerly of Little Rock, Ark., was recently awarded the Bronze Star "for meritorious service in support of military operations against the enemy from Jan. 4, 1944 to May 1, 1945." The citation accompanying the award declared that "Major Marchbanks, by professional skill and untiring effort, maintained an efficient medical center after setting up in an area without facilities. He constructed the medical center from salvaged materials. His sound judgment has contributed immeasurably to the combat achievement of his unit. He displayed profound interest in malaria and venereal disease control along with developing a coordinated program for each which resulted in no new cases of malaria and a decided drop in the venereal disease rate despite the highly infected area in which his unit was located. His knowledge and meritorious performance of duty have reflected great credit on his unit and the armed forces of the United States of America." Dr. Marchbanks graduated from Howard University College of Medicine, Washington, D. C., in 1937 and entered the service March 28, 1941.

Major Paul C. Samson

The Legion of Merit was recently awarded to Major Paul C. Samson, formerly of Oakland, Calif., "for exceptionally meritorious conduct in the performance of outstanding services in North Africa, Italy, France and Germany from March 9, 1943 to May 8, 1945." The citation accompanying the award reported that "as officer in charge of a thoracic surgical center, Bizerte, Tunisia, Major Samson inaugurated many advances in the care of thoracic injuries which became widely adopted in subsequent military campaigns in Europe. Major Samson has performed major surgical operations or supervised such operations on more than 500 severely wounded casualties suffering from injuries to the chest. As a result of his outstanding contributions many severely wounded soldiers suffering from wounds of the lungs recovered and returned to military duty, thereby reflecting great credit on Major Samson and the Medical Corps of the Army of the United States." Dr. Samson graduated from the University of Michigan Medical School, Ann Arbor, in 1928 and entered the service May 10, 1941.

Captain W. Garrett Hume III

For heroic action in which he voluntarily endangered his own life to save others, the Soldier's Medal was recently awarded to Capt. W. Garrett Hume III, formerly of Wilmington, Del. According to the citation accompanying the award Captain Hume, a medical officer with the 15th Air Force in Italy, went to the scene immediately when an ammunition ship exploded in the port of Bari, Italy, and began removing the injured and rendering first aid at the scene of the tremendous blast. "With full knowledge of the possibility that another explosion equally destructive might occur at any time, he courageously entered the most dangerous area and carried injured military and civilian personnel from wrecked buildings, in one instance entering a burning ship to effect the rescue of several persons." Dr. Hume graduated from Temple University School of Medicine, Philadelphia, in 1941 and entered the service in August 1942.

Lieutenant Colonel Harrison S. Collisi

The Bronze Star was recently awarded to Lieut. Col. Harrison S. Collisi, formerly of Grand Rapids, Mich., "for meritorious service in connection with military operations, as commanding officer, 197th General Hospital, European Theater of Operations, from Dec. 29, 1944 to May 8, 1945." Continued the cita-

tion accompanying the award, "Lieutenant Colonel Collisi displayed exceptional ability in organizing and operating the unit hospital at Saint Quentin, France, for the receiving and treatment of troops wounded in combat on the continent. He was responsible for efficiently solving the numerous technical problems which arose in setting up and the operation of this hospital during this period. By his superior organizational ability, untiring efforts and keen foresight in planning, Lieutenant Colonel Collisi established a general hospital which displayed a high degree of perfection and reflects high credit on himself and the armed forces of the United States." Dr. Collisi graduated from the University of Michigan Medical School, Ann Arbor, in 1912 and entered the service May 18, 1942.

Major Duncan A. Cameron

The Bronze Star was recently awarded to Major Duncan A. Cameron, formerly of Brighton, Mich., "for meritorious service in connection with military operations against the enemy as general surgeon, 3d Auxiliary Surgical Group, from June 6, 1944 to Nov. 15, 1944 in France, Belgium and Germany. Since landing on the European continent on D day, Major Cameron displayed marked professional skill and great personal vigor in the performance of innumerable surgical operations. He often continued his medical duties for extremely long periods of time in order to perform immediate life-saving operations on battle casualties. By his sound medical knowledge and unswerving devotion to duty Major Cameron reflected credit on himself and the military service." Dr. Cameron graduated from Wayne University College of Medicine, Detroit, in 1933 and entered the service Oct. 2, 1942.

Lieutenant Colonel Robert W. Lloyd

The Bronze Star was recently awarded to Lieut. Col. Robert W. Lloyd, formerly of Portland, Ore., for services during the hard fighting with the 10th Mountain Unit in the Apennines of Italy last winter. "His superlative performance during the period was characterized by a conscientious devotion to duty, with meticulous attention to the sick and wounded. . . . He maintained a high state of discipline and morale among the men under his command, many of whom were frequently required to work long hours without rest under distressing conditions. He played a major role in providing efficient medical support to the combat troops within the division, bringing him much praise and commendation." Dr. Lloyd graduated from the University of Oregon Medical School, Portland, in 1934 and entered the service Dec. 1, 1938.

Captain Blaine Carey

The Bronze Star was recently awarded to Capt. Blaine Carey, formerly of Nebraska City, Neb., for "meritorious service with the 26th Infantry Division." Dr. Carey graduated from the University of Nebraska College of Medicine, Omaha, in 1943 and entered the service Jan. 20, 1944.

Captain Herbert F. Staubitz

Capt. Herbert F. Staubitz, formerly of Omaha, was recently awarded the Bronze Star for performance of duties as receiving officer of the 128th Evacuation Hospital in Germany. Dr. Staubitz graduated from the University of Nebraska College of Medicine, Omaha, in 1932 and entered the service Sept. 7, 1943.

MISCELLANEOUS

AMERICAN RED CROSS HEALTH SERVICES ADVISORY BOARD

Basil O'Connor, national Red Cross chairman, recently announced the appointment of an Advisory Board on Health Services to coordinate activities of the American Red Cross in the health field. Dr. Lewis H. Weed, Baltimore, was named board chairman; he is also chairman of the medical sciences division of the National Research Council and director of Johns Hopkins University School of Medicine, Baltimore. The committee consists of 109 men and women from twenty-five states and the District of Columbia and includes not only physicians but nurses, dentists, health educators, medical and psychiatric social workers, hospital administrators and others. The three members of the board who will serve as vice chairmen are Dr. Roger I. Lee, Boston; Dr. John D. Lyttle, Los Angeles, and Dr. John Romano, Cincinnati. The executive committee includes as vice chairmen George Baehr, New York, and Kenneth I. Maxcy, Baltimore, and as secretary Henry R. Viets, Boston. The members are Amos Christie, Nashville; Miss Ruth Emerson, Chicago; Evarts A. Graham, St. Louis; Morris Fishbein, Chicago; Ira Hiscock, New Haven, Conn.; Charles C. King, New York; Basil MacLean, Rochester, N. Y.; Walter Scherer, Houston, Texas; Miss Mirian W. Sheahan, Albany, N. Y.; Ernest L. Stebbins, New York; Edward A. Strecker, Philadelphia, and Abel Wolman, Baltimore. The first meeting of the board's executive committee will be held in Washington, December 15. The entire board will meet at least once a year. Major Gen. Norman T. Kirk, surgeon general of the Army, Vice Admiral Ross T. McIntire, surgeon general of the Navy, and Thomas Parran, surgeon general, U. S. Public Health Service, were named ex officio members of the general board.

FELLOWSHIPS OFFERED IN NEUROPSYCHIATRY

The Austin Riggs Foundation, Stockbridge, Mass., recently announced that fellowships for three years' training in neuropsychiatry are now open. Army personnel who wish to go into the field of neuropsychiatry may apply to Dr. Charles H. Kimberly, Medical Director, Austin Riggs Foundation, Stockbridge, Mass.

MEDICAL AND SURGICAL RELIEF COMMITTEE OF AMERICA, INC.

The Medical and Surgical Relief Committee of America, Inc. (420 Lexington Avenue, New York 17), recently sent a stationary x-ray machine and accessories, donated by Brig. Gen. Theodore Roosevelt, to France for the use of returned soldiers. The x-ray bears a bronze plaque including the names of the French troops with whom General Roosevelt served in both World War I and II, together with dates of his service and a list of his decorations.

NURSES NATIONAL MEMORIAL TO BE ERECTED IN WASHINGTON

A $2,000,000 Nurses National Memorial is to be erected in Washington, D. C., in tribute to the devotion and sacrifice of the war nurses and medical women of World War II. The Memorial Committee, with headquarters at 825 Woodward Building, Washington, D. C., announced that the proposal to honor the heroic nurses with a living, practical memorial has struck a responsive note from people in all walks of life. Mrs. Norman T. Kirk, wife of Major General Kirk, Surgeon General of the United States Army, who conceived the project, and who herself served as an army nurse in World War I, said:

"When the proposal to build and endow a Nurses National Memorial in Washington to help the war nurses throughout the years is fully understood, we hope the funds will be forthcoming.

"The memorial will be a center for war nurses. It will be their 'home' when they are in the capital city. Those who need a rest period from their nerve and body racking work in war and in peace will find it here.

"Those who seek educational work and who come here for special courses will make the memorial their center of activities.

"Such a building is urgently needed. It will provide these facilities for the medical women at very low cost of the food served. This is a purely volunteer effort but we will find the way to make it a reality."

Arrangements are being made by the executive committee for a luncheon early in December, when detailed plans for speeding the campaign will be formulated.

ORGANIZATION SECTION

MINUTES OF THE ANNUAL SESSION OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN CHICAGO, DECEMBER 3-5, 1945

HOUSE OF DELEGATES

First Meeting—Monday Morning, December 3

The House of Delegates convened in the Red Lacquer Room of the Palmer House and was called to order at 10:15 a. m. by the Speaker, Dr. H. H. Shoulders.

Preliminary Report of the Reference Committee on Credentials

Dr. G. Henry Mundt, Chairman, stated that 160 delegates were registered at this time. Dr. Mundt requested that officers and members of official bodies of constituent state and territorial medical associations be registered in attendance. The Speaker stated that no official registration was required of them since they could listen in and have their say at any reference committee meeting. The Secretary announced that he would try to make arrangements for such registration.

Roll Call

The Secretary called the roll and announced that a quorum was present.

Distinguished Service Award

Dr. James R. Bloss, Chairman of the Board of Trustees, presented a report of the Board, as follows:

The Committee on Distinguished Service Award of the American Medical Association submitted five names to the Board of Trustees.

In accordance with chapter VI, section 5, of the By-Laws, the Board has selected by ballot the following names for presentation to the House of Delegates in alphabetical order: Dr. Isaac A. Abt, Chicago; Dr. A. J. Carlson, Chicago; Dr. George R. Minot, Boston.

The Speaker appointed as tellers Drs. Thomas A. Burcham, Chairman, Iowa; Dr. Frank R. Mount, Oregon; Dr. Lee O. Frech, Illinois; Dr. Walter P. Anderton, New York, and Dr. Alex M. Burgess, Rhode Island.

The tellers spread the ballot, and the Secretary announced that one hundred and fifty-six votes had been cast, of which Dr. Abt received forty-nine, Dr. Carlson forty-five and Dr. Minot sixty-two.

The Speaker announced that, since no one nominee had received the majority of the votes cast, the name of the one receiving the lowest number of votes would be dropped and ballots prepared for Drs. Abt and Minot.

The Secretary stated that one hundred and fifty-two votes had been cast, of which Dr. Abt received fifty-six and Dr. Minot ninety-six.

The Speaker declared Dr. George R. Minot, who had received the majority of the votes cast, to be elected by the House of Delegates to receive the Distinguished Service Award of the American Medical Association.

Adoption of Proceedings of Chicago Session in 1944

On motion of Dr. Thomas S. Cullen, Maryland, duly seconded and carried, the proceedings of the Chicago Session of the House of Delegates held in 1944 were adopted as printed.

Address of Speaker, Dr. H. H. Shoulders

The Vice Speaker, Dr. R. W. Fouts, Nebraska, presided while the Speaker read his address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker, Members of the House of Delegates and Guests:

Without a doubt the physicians of this country now have the confidence and respect of the general public to a higher degree than has been the case for a long time, if not for all time. This is desirable from the point of view of the public interest as well as from that of the medical profession. Organized medicine still has its critics, of course, and no doubt always will have them as long as it refuses to bend its knees to those who would rule it from without. These critics, however, are less numerous and certainly less potent than they were not so long ago. I mention this fact not merely to point with pride, but rather to consider briefly the influences and factors that have played an important part in achieving for medicine this public esteem.

It would be difficult, if not impossible, to identify all the factors that have played some part in producing this esteem, and still more difficult to appraise accurately the importance of each. Here are a few of the factors that I believe are of the greatest importance:

1. Better public relations. Excellent work in the field of public relations has been done by individual members and by official agencies of the Association, with beneficial results.

2. The education of the public. Programs designed to acquaint the public with the meaning and value of good medical care and as to what constitutes good medical care have been fruitful of good results.

3. Progress in the science and art of medicine. Great progress has been made in the science of medicine and in the art of applying it to the needs of humanity. We doctors are now in a position to render services we could not render a few years ago. Our services are more effective and beneficial than they have ever been previously.

4. The factor of paramount importance, one which in all justice and propriety may be called the soul of medicine.

I would not attempt a specific definition of the word "soul". No one has ever supplied a precise and generally accepted definition; yet we all recognize its existence in the human being and the possibility of its existence in a human organization. No one has been able to determine the place of the soul in the mechanism of the body. I certainly would not attempt to designate its location or even its possible location in this organization. In fact its attributes are so apparent throughout the organization that it would be folly to attempt to assign to it a specific location. The presence of a soul in an individual or organization is recognized by its humane attributes, such as charity, courage, lofty ideals and loyalty to them, and a genuine interest in the welfare of fellow human beings. The soul of medicine is not of recent conception. It appeared when medicine began as a profession. The ideals and principles to which young physicians dedicated themselves in the time of Hippocrates and the original code of ethics could have had no other origin.

The ideals and purposes set forth in the constitution of this Association furnish adequate proof that the soul of medicine has lived through the centuries. There is ample proof that it has survived to this day. In the last fifteen years our nation has passed through many crises, including the worst depression within the memory of men now living and the most gigantic war in all history. There have been many times that have "tried men's souls." The soul of medicine has been tried also and not found wanting. Medicine has never been willing to sell its soul for a mess of pottage.

To recite but a few of the acts of heroism, sacrifice and charity by members of the medical profession in this period

would consume many hours; I shall not mention resistance to temptations to which many another have succumbed. The lamented Ernie Pyle through his touching record of this war gave the public a fleeting glimpse of the devotion and sacrifice of doctors in the military service and what that devotion and sacrifice meant to soldiers on the battle fronts. We know something of those who rendered their services in the less glamorous atmosphere of the home front. They too served beyond the call of duty and many beyond the limits of endurance. In times of depression more than any other time the soul of medicine has opportunities and occasions to find expression. In many different ways it speaks to the people who grasp something of its significance in the delivery of the services we call medical care. In literature, both sacred and profane, we read that a soul may be lost or sold—that a soul may vary in its dimensions. To the preservation of the soul of medicine and the great dimensions that it has achieved we dedicate ourselves ever anew.

As I view the future I see that the soul of medicine will still be tried. Possibly the attention of physicians for the moment may become so sharply focused on some economic issue or proposal of political expediency that the soul may be lost to sight. This would be a tragedy of the first magnitude.

Sociologists, economists and political scientists have made strenuous attempts to bring medicine under the domination of one or all of these groups through the mechanism of legislative enactment. Their efforts have failed. Their lack of success, in my opinion, is due not so much to the fact that their proposals were untried and unpractical as to their failure to recognize and take into account the soul of medicine.

The responsibility for the continued preservation of the best in American medicine still rests largely in the hands of this House of Delegates. Let us again, now as in the past, concern ourselves, with advancing the science of medicine, with maintaining the standards of medical education and with delivering a higher quality of medical service, ever mindful that science without a soul may be cruel and inhumane, whereas science possessed of a soul is the very highest achievement—the apotheosis of humanity.

In Memorian

The Speaker resumed the chair and requested the Vice Speaker to read the list of names of members of the House of Delegates and/or officers of the American Medical Association notice of whose death had been received since the 1944 Chicago session.

The Vice Speaker read the list of names as follows:

(The dates following the names indicate years of service in the House or as officers of the Association.)

Benjamin F. Bailey, Nebraska, 1930-1937.
Samuel C. Baldwin, Utah, 1904-1905; 1908.
Edgar G. Ballenger, Georgia, 1912.
Philip F. Barbour, Kentucky, 1936.
Eben H. Bennett, Maine, 1912-1913.
Hugh Cabot, Massachusetts, 1911-1915.
Byron M. Caples, Wisconsin, 1905-1908; 1911.
Walt P. Conaway, New Jersey, 1931-1938. First Vice President, 1913-1914.
James H. Corwin, Pennsylvania, 1934; 1942-1943.
James M. Dinnen, Indiana, 1913-1914.
Edwin D. Ebright, Kansas, 1926.
David L. Edsall, Boston, First Vice President, 1919-1920.
John W. Flinn, Arizona, 1920; 1922.
George Edward Follansbee, Ohio, 1919-1922; 1924-1930. Member Judicial Council, 1925-1945; Chairman, 1928-1945.
Oscar M. Gilbert, Colorado, 1928-1929.
William A. Groat, New York, 1939-1940; 1942.
John T. Herron, Tennessee, 1904-1905.
Michael Hoke, Georgia, 1908.
Lawrence C. Ingram, Florida, 1932.
Peter Irving, New York, 1938-1940.
John L. Jelks, Tennessee, 1911.
John E. Jennings, New York, 1931.
Elmer L. Kenyon, Chicago, Section on Laryngology, Otology and Rhinology, 1917.
J. Richard Kevin, New York, 1920-1925; 1927-1931; 1935-1936.
William A. Krieger, New York, 1942.
John Leeming, Chicago, Second Vice President, 1916-1917.
Michael M. Lucid, New York, 1915.
Charles MacLachlan, North Dakota, 1916; 1918; 1929-1930.
Van Newhall Marsh, Ohio, 1938.
Joseph McFarland, Philadelphia, Section on Pathology and Physiology, 1905-1906.
Frederick W. Meyer, Philippines, 1937-1938.
Douglas C. Moriarta, New York, 1907-1909.
William A. Mulherin, Georgia, 1942-1944.
John Q. Myers, North Carolina, 1920-1921; 1937-1939.
Edwin M. Neher, Utah, 1922; 1924; 1926-1928.
J. Mark O'Farrell, Texas, 1920.
Richard F. O'Neil, Boston, Section on Genito-Urinary Diseases, 1912.
Edward M. Pallette Sr., California, 1933; 1935-1936; 1938-1942. Member Board of Trustees, 1942-1944.
Edward C. Podvin, New York, 1941-1943.
Leonard G. Redding, Pennsylvania, 1940-1943.
Charles M. Rosser, Texas, 1929; 1931.
Charles J. Smith, Oregon, 1905; 1910-1911.
Alexander H. Stewart, Pennsylvania, 1942-1944.
Samuel W. S. Toms, New York, 1911; 1913-1914.
George E. Tooley, Kansas, 1908.
Philemon E. Truesdale, Massachusetts, 1929.
James B. Vaughn, South Dakota, 1922-1923.
John A. Walker, Oklahoma, 1910.
James T. Wayson, Hawaii, 1905.
William K. West, Michigan, 1905.
Sidney J. Wolfermann, Arkansas, 1944.
David I. Wolfstein, Cincinnati, Section on Nervous and Mental Diseases, 1905.
Hugh Young, Maryland, 1910; 1914; 1926.

On request of the Speaker, the House stood in silent tribute to the memory of those of its members and of officers of the Association who had died since the Chicago session of the House in 1944.

Reference Committees

The Vice Speaker resumed the chair and requested the Speaker to proceed with the appointment of his reference committees.

The Speaker read the list of appointments and requested permission to appoint four additional reference committees, as follows: Reference Committee on Executive Session, Reference Committee on Postwar Planning, Reference Committee on Medical Care of Veterans and Reference Committee on Industrial Health.

It was moved by Dr. E. S. Hamilton, Illinois, seconded by Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology, and carried, that the House approve the appointment of the four additional reference committees requested by the Speaker.

The personnel of all reference committees as appointed by the Speaker was as follows:

SECTIONS AND SECTION WORK

William Weston, Chairman, Section on Pediatrics

James Beebe, Delaware
Hugh P. Smith, South Carolina
Warren L. Allee, Missouri
Olin H. Weaver, Georgia

RULES AND ORDER OF BUSINESS

Francis F. Borzell, Chairman, Pennsylvania

E. G. Wood, Tennessee
F. S. Crockett, Indiana
Samuel J. McClendon, California
Lucius F. Donohoe, New Jersey

MEDICAL EDUCATION

Fred M. Smith, Chairman, Section on Practice of Medicine

Thomas S. Cullen, Maryland
George W. Kosmak, New York
Leon J. Menville, Louisiana
A. W. Adson, Minnesota

LEGISLATION AND PUBLIC RELATIONS

Edwin S. Hamilton, Chairman, Illinois

Lloyd Noland, Alabama
John J. Masterson, New York
Edward L. Bortz, Pennsylvania
Raymond L. Zech, Washington

HYGIENE AND PUBLIC HEALTH

Felix J. Underwood, Chairman, Mississippi

Warren F. Draper, U. S. Public Health Service
D. F. Cameron, Indiana
Walter E. Vest, West Virginia
Creighton Barker, Connecticut

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

Carl R. Steinke, Chairman, Ohio

Karl S. J. Hoblen, Nebraska
Thomas A. Foster, Maine
George P. Johnston, Wyoming
Ross S. McElwee, North Carolina

REPORTS OF OFFICERS

Floyd S. Winslow, Chairman, New York

Thomas K. Lewis, New Jersey
Deering G. Smith, New Hampshire
Harold W. Smith, U. S. Navy
George H. Curfman, Colorado

REPORTS OF BOARD OF TRUSTEES AND SECRETARY

Thomas A. McGoldrick, Chairman, New York

William A. Coverttry, Minnesota
J. B. Lukins, Kentucky
Dwight O'Hara, Massachusetts
Thomas F. Thornton, Iowa

CREDENTIALS

G. Henry Mundt, Chairman, Illinois

H. B. Everett, Tennessee
Charles R. Rountree, Oklahoma
Howard R. Dudgeon, Texas
Edward N. Roberts, Idaho

MISCELLANEOUS BUSINESS

James R. Reuling Jr., Chairman, New York

Stephen E. Gavin, Wisconsin
Henry A. Luce, Michigan
Leonard W. Larson, Section on Pathology and Physiology
William Bates, Pennsylvania

EXECUTIVE SESSION

Walter F. Donaldson, Chairman, Pennsylvania

Edward Jelks, Florida
James R. McVay, Missouri
William R. Brooksher, Arkansas
Thomas P. Murdock, Connecticut
Clark Bailey, Kentucky
Allen H. Bunce, Georgia

POSTWAR PLANNING

Charles H. Phifer, Chairman, Illinois

J. Stanley Kenney, New York
Leo G. Christian, Michigan
F. J. L. Blasingame, Texas
Harry V. Paryzek, Ohio
B. R. Kirklin, Section on Radiology
J. Morrison Hutcheson, Virginia

MEDICAL CARE OF VETERANS

Walter G. Phippen, Chairman, Massachusetts

Forrest L. Loveland, Kansas
James C. Sargent, Wisconsin
Henry R. Viets, Section on Nervous and Mental Diseases
Leland S. McKittrick, Massachusetts
Parke G. Smith, Ohio
Britton E. Pickett Sr., Texas

INDUSTRIAL HEALTH

William L. Estes Jr., Chairman, Pennsylvania

Oliver W. H. Mitchell, New York
Stanley H. Osborn, Section on Preventive and Industrial Medicine and Public Health
Dwight H. Murray, California
James Q. Graves, Louisiana
James P. Kerby, Utah
Barney J. Hein, Ohio

TELLERS

Thomas A. Burcham, Chairman, Iowa

Frank R. Mount, Oregon
Lee O. Frech, Illinois
Walter P. Anderton, New York
Alex M. Burgess, Rhode Island

SERGEANTS-AT-ARMS

Frank E. Reeder, Chief, Michigan

A. P. Nachtwey, Assistant, North Dakota
J. D. Hamer, Assistant, Arizona

Address of the President, Dr. Herman L. Kretschmer

The Speaker resumed the chair and presented the President, Dr. Herman L. Kretschmer, who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

The realization that my term of office is about to come to a close and that this is my last opportunity to address the House of Delegates naturally creates a feeling of sadness. However, the honor and privilege to serve you during the past two years have given me joy and satisfaction and more than compensates.

May I take this opportunity to praise those members of our profession who have been ever willing to do the "leg work" for American medicine and who at a great sacrifice of time and comfort do the many chores requested of them. These physicians many times perform an indispensable function. By the nature of their tasks, their activities are little known to the profession at large; yet they render outstanding service to you and to me and their praises are rarely sung.

I should like also to commend those who serve on special committees and those who tour the nation speaking to medical societies and lay audiences, often at a great sacrifice of time from their practices.

I view with alarm the gross indifference of so many of our members, eminent and successful practitioners, specialists and those who hold responsible teaching and other positions who do not manifest any interest in the work of their county or state society, much less in the activities of the American Medical Association. It seems to me that it is high time for them to take an active interest in the affairs of American medicine. They should ask themselves the question What can I do for American medicine? instead of What can American medicine do for me? I would urge the younger men especially to take an active interest in their county and state societies and so gradually work into the affairs of the American Medical Association. It is they who must guide the destinies of American medicine in the years to come.

REGIMENTATION OF THE PRACTICE OF MEDICINE

The tendency in this country to enact legislation toward regimentation of the patient and the physician is of the greatest importance to every man, woman and child. This tendency is equally important to the medical profession, to business, to industry and to labor. It should be perfectly clear to every one that regimentation always leads to totalitarianism, and it always begins under one guise or another with medical practice. It is insidious in onset and progressive in its course, and the fatal result is regimentation of labor and business as well as of the practice of medicine.

Those most vociferous in favor of regimented medicine formerly pointed with pride to Germany as a country which was the furthest along with social legislation. Since it has led to totalitarianism and the complete collapse of Germany, they no longer hold her up as an example of regimentation of medical practice.

One might rightly ask Since when have the American people suddenly become so sick and so incapable of taking care of themselves? Since when have our people become so dependent as to need security from the cradle to the grave? I don't think they have. I believe the pioneer spirit of our people is not gone. I feel that the average American wants to establish his own security and select his own physician. If you don't believe that, talk to the returning G. I's.

The American Medical Association, since its founding nearly one hundred years ago, has always been interested in raising the health standards of our people. We as physicians know better than any one else that a healthy nation is a happy and a strong nation. With the objective of improving the health standards of the people we have no disagreement with any one. We, however, disagree wholeheartedly with the technic at present advocated to attain this end. When will the legislator, the "do gooder" and others learn that disease cannot be cured by the passage of laws?

It is interesting to note that the strongest pressure to upset the present-day system of practice comes from areas with the largest number of doctors, hospitals and medical schools.

How then can the problem be met? Not by upsetting the system that has made the people of this country the healthiest in the world. The solution is not in the passing of laws and the institution of a system that will lower the quality of care; it is by doing exactly what is done with the sick patient—namely, to make a careful examination of the patient to locate and determine the cause of his illness and to institute the correct treatment. Exactly the same technic can be applied to this problem. When an epidemic arises in a town we don't burn down the town. When a factory falls off in production and efficiency, the causes are determined and corrected. The manufacturer does not tear down the factory and build a new one.

And so the solution of this problem is to determine the site and causes and to institute corrective measures, going about it in an "honest," efficient way. The American Medical Association through its Council on Medical Service and Public Relations has taken a long step forward. The various state medical societies likewise are on the move. I believe that this House of Delegates should make our position very clear. I believe that the House of Delegates, speaking for more than 125,000 physicians of this country, should make it perfectly clear that the physicians are the ones who render medical care, that the physicians of this country will not be regimented and that when chaos in medical care arises the people will have had ample warning of what lies ahead. Let our position be clearly defined.

I believe that your Council on Medical Service and Public Relations, in cooperation with other groups, can find the answers to these problems if they are given the opportunity to do so.

CHANGES IN THE PROGRAMS OF THE COUNTY MEDICAL SOCIETY

The county medical society must always remain the basic unit in our medical organization. For many years there has been little change in the program and activities of county medical societies. With the changing trends in medical practice, this is a good time to take inventory and to make whatever changes are necessary in the work of the county medical society to make its work more efficient:

1. The scientific program might with great advantage be enlarged or expanded. Instead of having each county medical society conduct a scientific program once a month, it might be better to have scientific meetings of six or eight or ten adjoining counties. Then the program could be arranged as an all day and evening scientific program. This would ensure a large gathering, better speakers and a better coordinated program. Such a program could be planned to cover many topics, and the subjects could be presented from a postgraduate point of view.

2. The regular organizational meetings of the county medical society could then be devoted wholly to such problems as are ethics, economics and organization.

3. With this rearrangement of the workings of the county medical society, meetings should be devoted to the interests of the public at which timely educational topics could be presented to a lay audience. Moreover, meetings could be held in association with the social service, relief, political, public health and similar groups. Here the position of the medical profession on many of the present-day controversial problems could be presented to the laity on an educational basis.

THE X-RAY FILM QUESTION

During the course of the year I see many patients who have had elsewhere recent x-ray films, including intravenous pyelograms. Instead of repeating these studies, I suggest that the patient bring in his films, so that, if they are satisfactory, expensive repetition may be avoided. When the patient tries to obtain his films, some physicians, hospitals and roentgenologists refuse to release them. The result is that the patient is irked, an expensive procedure must be repeated and enemies are made for the medical profession.

These attitudes are leading to a great deal of dissatisfaction on the part of both patients and physicians and indirectly encourage those who would regiment medical care.

There must be some solution to this problem. The House of Delegates should clarify the issue. I am sure you will agree with me that this situation needs correction.

THE HORMONE SITUATION

Among the problems demanding prompt consideration by official bodies in American medicine is the present confused hormone situation. I have only the greatest admiration for the workers in this field—the biochemist, the physiologist, the pharmacologist and some of the clinicians, all of whom have made wonderful contributions to our knowledge and understanding of the entire subject of endocrinology.

Associated with this great achievement many situations have arisen that need correction because they are leading to gross abuses. Medicine is, as we all know, subject to fads. Unfortunately there is now a tendency to consider every obscure complaint as being of endocrine origin, if it is not psychosomatic or neuropsychiatric or even due to a deficiency of vitamins. Many physicians and laymen seem to believe that anything that is immediately unexplainable must be of endocrine origin and requires hormone therapy.

The medical profession and the public hear much of the "male climacterium," a term which in my opinion serves too frequently as a catchall for anything and everything that happens to a middle aged man that is in the least bit obscure. When one reviews the long list of symptoms ascribed to this condition, one finds nearly all the symptoms listed in the textbooks except housemaid's knee, and I don't know why it is not included.

I have seen patients with obscure lesions of the prostate given long courses of hormone injections. I have seen patients with mental problems, with family incompatibility, with fear complexes and with impotence, both psychic and prostatic in origin, for whom diagnoses of male climacterium were made and who were advised to take long courses of hormone therapy. Castrated patients without any subjective symptoms have been advised to have hormones so as to make them fertile. The injection of hormones for undescended testis has also been subjected to misuse. Such use has been tragic in many instances.

Why is it that we must see so frequently the advancement of new ideas and technics subjected to abuse? When will we learn to differentiate between experimental and established treatment, between advertising puffery and established facts? When will we learn to look on the patient as an individual and not as a catchall for shotgun treatment? Hormones have great possibilities, but let us not help to turn their use into another vitamin-like fiasco.

People have become hormone conscious and request hormone injections for any and all complaints. Not only does the medical profession have a serious obligation to correct these abuses in their practices, but the editors of health columns, scientific writers in lay periodicals and the purveyors of these products have an obligation in the prevention of the dissemination of wrong information. The "elixir of life" has not yet been found. If those who educate do not meet their responsibility, they must shoulder the blame when harm is done.

ANIMAL EXPERIMENTATION

One of the subjects which I believe should receive your earnest consideration is the need to educate our people on the subject of animal experimentation. You are just as familiar as I am with the recurring attacks against animal experimentation. The prevention of these recurring attacks must be a continuing program of education. I am sure that, once the public has realized the value and the far-reaching results of animal experimentation, we will gain their confidence and support. Such an educational program must be far-reaching and not sporadic. It should be projected for many years, not just when the need arises. The public should be told that the antivivisectionists throttle research by playing on the emotions of the people. As a result of the sentimental activities of the antivivisectionists, the public has not been informed as to the true facts of animal experimentation, particularly that both man and animals are the benefactors.

I believe that the county medical society should take the lead and cooperate with the state medical society. Unless a definite, long range program is carried out, medical science will be stifled to the detriment of the patient. The use of the radio, newspapers and motion pictures favorable to animal experimentation should be extended. Perhaps the time has come when medicine should take the offensive and obtain enabling legislation rather than to remain ever on the defensive.

THE MARIHUANA PROBLEM

Acutely before the nation today is the problem of marihuana. As guardians of the public health and as purveyors of information to those seeking it, the American Medical Association should take the leadership in securing the scientific studies necessary to positive conclusions.

There is a good deal of confusion and difference of opinion on this subject. Some glibly dismiss the harmful effects from marihuana. Others are firm in their convictions that the use of marihuana is dangerous. We as physicians who are interested in safeguarding the health of the people of this country should be deeply concerned. Law enforcement officers, legislators, judges of the courts, lawyers and social workers are equally interested. They naturally look to the medical profession for guidance. The reports on the rapidly increasing spread of the use of marihuana are conflicting. What is the layman to do in seeking an answer to this problem when diametrically opposing statements are made? Where should law enforcement officials turn for proper guidance? I believe that this problem with its far-reaching implications is deserving of your earnest consideration. To whom if not to the American Medical Association shall those interested in this problem turn for authoritative information? I myself believe that the marihuana habit is not harmless. Evidence has been

presented to show that the use of marihuana has resulted in the sudden unbalance of the mind and with it the commission of a crime. Let us take an active interest in this subject and establish data through the American Medical Association that will be authoritative and available to all interested.

THE DEFERMENT OF MEDICAL STUDENTS

The Council on Medical Education and Hospitals and the House of Delegates must take great pride in the results of the establishment of the certifying boards. By this accomplishment there were made available for the armed forces lists of certified specialists, so that our military officials were able to render the best possible medical and surgical care to the men and women of our armed forces. The Board of Trustees rendered an outstanding service when it undertook to classify all physicians of this country and so was ready to supply the armed forces with available medical personnel. Contrast these achievements with the haphazard procedures followed in the handling of premedical and medical students. These procedures have led to confusion and chaos, and as a result there will be a great shortage of physicians in the postwar era.

I would urge this House of Delegates to take positive action and to demand that a similar situation be not permitted to arise again. We will find in this action the complete support of engineers, chemists, physicists, mathematicians and, in fact, the members of every scientific profession, since all branches of science have suffered and are still suffering from this amazing stupidity of our governmental leaders.

THE PROBLEM OF CHRONIC ILLNESS

The care of the patient with chronic illness is not a new problem, as many would have us believe. Nevertheless the ever increasing number of persons who reach the time of life when many of these diseases begin to manifest themselves puts new emphasis on this situation. The great advances of medicine, which have increased the span of life from 42.5 years in 1900 to 64.5 in 1942, have multiplied tremendously the diseases of advanced years seen by physicians. As the span of life will continue to increase, so will the number of patients who suffer from the degenerative diseases increase. The medical profession has given much study to these problems and as a result geriatrics, a new branch of medicine, was born.

Chronic illness carries with it serious social and economic, as well as medical, problems.

We as physicians are vitally interested in this problem. I believe that this House of Delegates should give serious study to the demands created in the field of geriatrics. What constitutes chronic illness? What is the difference between illness that is chronic and incapacitating and that which, while chronic, does not necessarily prevent the patient from earning a livelihood? What should be the obligation of the family, of industry and of the state in this problem?

THE RETURNING MEDICAL OFFICERS

Although the Association has given serious study to the problems of the returning medical officers, some problems have arisen that it could not foresee. The study and expansion of postgraduate facilities and the establishment of the Bureau of Information have been very helpful to the returning officers. There are several problems that are deserving of your earnest consideration. I refer to the difficulty on the part of these men to obtain suitable office space and suitable hospital appointments. These men have served in the armed forces at a great sacrifice. They have performed a great patriotic service and should be given all the help possible. The question of rearranging one's office hours should be simple. The difficulties often placed in the way of these men in obtaining hospital appointments is something that deserves your earnest consideration. In many hospitals the privilege of being a member of the staff or the privilege of bringing patients to the hospital is contingent on membership in the county medical society. In some places returning medical officers have been placed on probation for one or two years. This practically closes to them the doors of the hospitals. The procedure is unwarranted, unfair and un-American.

For a quarter of a century I have been officially connected with the American Medical Association through positions held in the county, state and national societies. In this period problems that seemed wellnigh insuperable have arisen and have been considered by the House of Delegates. Many of the situations which confront us today were being viewed with alarm and despair in 1918 and 1919, when my first official relationships were made. As I view the years that have passed, we have not given an inch of ground to the opposition but have gone steadily forward, advancing medical science, extending medical service and gaining leadership in all the world for American medicine. This is no time for retreat. Let us go forward in the firm belief that we are waging a battle for the right, for the ideals on which medicine must stand or fall, for the advancement of the science of medicine and for the elimination of unnecessary suffering and disease.

Address of the President-Elect, Dr. Roger I. Lee

The Speaker presented the President-Elect, Dr. Roger I. Lee, Boston, who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

Your President-Elect would indeed be an ingrate if he did not express formally on this occasion his deep and abiding acknowledgment of the very great honor that you have conferred on him. This House of Delegates is the duly accredited body representing the greatest and most important as well as the largest medical association in the world. I believe that the medical profession is the noblest of all the professions. I know, as all men know, that American medicine is at this day and date incomparably superior to medicine elsewhere. To be selected as President-Elect of the American Medical Association is at once flattering and brings a glow to one's pride, but it is also sobering and awesome. Some better man has said that great institutions have the potentiality of permanent life. They are rarely killed, they rarely commit suicide, but if they die they usually die of dry rot. And dry rot does not occur in an organism or organization that is healthy, growing, active and purposeful. In my long and intimate connection with this Association, vigorous growth and tremendous expansion have been its outstanding characteristics.

It is not my intent to pursue further this vein of thought. It is rather to beg your indulgence and embark on a discussion which may seem presumptuous on my part. I have been interested in and concerned with the improvements in and for the medical profession all my medical life. I early came to the conviction that, by and large, high standards of professional activity, like high standards of personal conduct, actually come from within. Hence began my interest in doctors as a group. It is a commonplace too often forgotten that professionals and experts are the only ones qualified to set up professional and expert standards. Obviously at those points where the professions touch the public or the laity, such public contacts and relations are not exclusively the concern of the professionals, but the technical standards within the profession belong to the profession.

It may be of little interest to you, but I first sat in this House of Delegates in 1910. It was, however, a number of years later that I became, as it were, a regular member of the House of Delegates. For the last ten years, by your election, I have served on the Board of Trustees. Over these years I have observed many things, and some of these reflections I want to give to you.

I have been through the well known phases so well described by a late member of Congress. At first he wondered why he was there, in such an august body, then he wondered why in —— these other fellows were there and finally came to the conclusion that it was a good thing that all men (including Congressmen) were not made in the same mold and that there were good reasons for all of them being there, even if in a very few instances the reasons seemed somewhat obscure.

There can be no doubt, I think, that the House of Delegates of the American Medical Association is a truly democratic body and functions in a truly democratic fashion. For myself I believe that the Delegates are elected in the spirit of democracy. Even if it were not so, the remedy lies elsewhere.

Perhaps the most common adverse comment on the House of Delegates and indeed on the American Medical Association relates to what is called insufficient infusion of younger men, of young blood into the House of Delegates. As I have said, the remedy does not lie in this House of Delegates but elsewhere, namely in the constituent associations. This may be an appropriate time to discuss this problem, because with many of the younger Fellows not yet released from the armed forces considerable changes can hardly be put into operation at this moment. But certainly with the return of those Fellows who were fortunate enough to be allowed to put on the uniform, prompt recognition of these younger men should be made by placing them on the councils and committees of the Association.

As to the House of Delegates, the question of rapid change in the personnel may well be debatable. There are advantages of continuity of service beyond doubt, but there are advantages too of steady, even if not rapid, changes in the personnel of the House. Personally, I am a believer in the general policy of steady change. I regard it as a particularly wise provision that the Trustees of the Association are permitted by the Constitution to serve only two consecutive terms. Since human nature is as it is, too often the replacement of an older man by a younger man is too often regarded as a deliberate insult even when perhaps only membership on a not very important committee is involved. But it is wise and desirable that as many Fellows of the Association as feasible be encouraged to participate in the affairs of the Association. Even as I look over this distinguished House of Delegates, I have to blush on account of my own antiquity of service. And while I may have some company and I am sure it is very select, it is hardly a corporal's guard.

It is a pet phrase of many that a democracy is of necessity inept, cumbersome and slow. That certainly has not been my observation in the case of the House of Delegates of the American Medical Association. It turns out a vast amount of business in an astonishingly short time. To be sure, like all democracies it is not given to hairtrigger decisions. Yet a study of its decisions leads, I believe, to the inescapable conclusion that they are sound and that the decisions are in step with the times and generally carefully evolutionary rather than recklessly revolutionary. There is less of the mob psychology in the actions of the House of Delegates than in most democratic bodies, including university faculties with which I am familiar. It is, I think, sound democratic dogma that the approval of the representative body, i. e. the House of Delegates, is, by chapter XVII of the By-Laws required for "the issuance of any memorial, resolution or opinion of any character whatever" in the name of the American Medical Association.

I have found that few of the profession and almost none of the laity seem to grasp the inflexible but democratic principle stated in chapter XVII of the By-Laws. Although it has been stated and restated to the point of monotonous reiteration, it is often regarded even by those who should know as a subterfuge. This democratic principle rightly applies to all, whether officer or Fellow, whether President (or President-Elect) or a paid employee of the Association, whether Trustee, member of a council or Editor. It may be at times painful or pride-pricking for some to admit and explain that the House of Delegates establishes the policies of the Association and not individuals, even presidents, not the Board of Trustees and not any council or committee. And it is sound democratic doctrine.

Since regular sessions of the House of Delegates are held only annually in normal times, the suggestion is often heard that an additional and presumably a midwinter meeting of the House be held. As I see it, the chief advantage would be in timing. For example, the meetings of some state medical societies may be held just before, or just after, or even during the annual meeting of the House of Delegates of the American Medical Association. Under those conditions, any business proposed by a state medical society for action by the House of Delegates of the American Medical Association of necessity lies over for a year. I am inclined to think a midwinter session of the House would help relationship with the constituent associations and would perhaps permit previous publication of business and opportunity for more careful study.

There are occasions when the same policy recently reaffirmed seems to carry more weight than when quoted as adopted a year before. I myself am somewhat skeptical of any great actual and tangible advantages of two meetings a year; but I believe that relations with the constituent associations and with the public would probably be benefited.

While it has been my observation that the House of Delegates conducts all its necessary business in one annual meeting, there are certain facts that may have weight. The growth of the Association has been phenomenal. While the Constitution requires the Board of Trustees to meet only twice a year, at the time of the annual session and in February, the Board customarily meets in addition in September and November, and its executive committee meets nearly monthly. A mass of detail is finally in somewhat abbreviated form passed on to the House of Delegates for its information and action. One wonders if a divided dose might not be easier for the House of Delegates.

It may or may not be pertinent, because the analogy is not at all close, to remark that the legislatures of forty-four states now meet only once in two years, whereas not very long ago annual sessions of state legislatures were decidedly the rule. Of course, there are trends in all such matters and these trends change, sometimes like a pendulum.

With the rapid growth of the Association there has been a tremendous expansion of councils, standing committees and bureaus, all of which were duly authorized by the House of Delegates. All report to the House of Delegates, some directly and some indirectly through the Board of Trustees. In actual practice there seems very little difference.

The work of the various councils, standing committees and bureaus is generally of very high standard. The Council on Pharmacy and Chemistry and the Council on Medical Education and Hospitals have done very notable even if quiet service for the Association for years. It is perhaps invidious to single out these two councils, but they are taken as illustrations. At the present time some of the councils, committees and bureaus are grievously handicapped by the inability to secure competent personnel, owing to wartime conditions.

Despite the most strenuous efforts of the Secretary and General Manager, these problems are still acute. It is to be hoped that the cessation of hostilities will enable for example the reconstruction of the Bureau of Medical Economics. Then too it should shortly be possible to carry out the wishes of the House of Delegates in regard to field agents. This will help the relations with the constituent associations.

It is a source of profound regret that every Fellow of the Association is not familiar with the many and varied activities that go on at 535 North Dearborn Street, Chicago, the headquarters offices. And I refer to the activities there, not the building that houses the activities.

The publications of the Association need no word of praise from me, since they are admittedly the best in the given fields. All of us know some parts of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, admittedly the greatest medical journal in the world. If controversy is any indicator, a greater proportion of readers read the editorials in THE JOURNAL than the editorials of any newspaper that I know. But some readers are addicts of the section on abstracts, while others are addicts of Tonics and Sedatives. I hope most of us knew WAR MEDICINE, which, having served a very valuable service, is passing off the scene. All of us should know the rehabilitated HYGEIA. The special journals seemingly meet a demand. The Directory and the QUARTERLY CUMULATIVE INDEX MEDICUS and some other publications are undertaken as a dutiful obligation to the profession.

The annual assembly is a great scientific event. As the Association has grown, some of the sections have become very large and apparently unwieldy. Some of the smaller sections have readily accommodated themselves to moderately increased audiences. The Council on Scientific Assembly has already made some interesting experiments, for example, with general meetings and panels. The Wartime Graduate Medical Meetings, carried out as a joint enterprise of the American Medical Association, the American College of Surgeons and the American College of Physicians, have done a tremendously

valuable service in meeting the needs of special conditions. This experience will doubtless be helpful to the Council on Scientific Assembly and may be translated into some modification of the meetings at the annual sessions. It must be remembered that large medical meetings are the fashion or the trend, if you will, of the day. Some of these meetings are now in a sense in competition with those of the American Medical Association.

At the moment the Scientific Exhibit is a conspicuous and popular feature of the annual sessions. This may be temporary or it may have suggestion for the sections, which often work in cooperation with the Scientific Exhibit.

With our changing world, one hears at times the query Does the Principles of Ethics, which the House of Delegates has adopted, apply satisfactorily to modern conditions in which economics is such an activating force? Medical practice today has many angles, many contacts, many relationships that did not previously exist. Moreover, there seems to be a relativity about ethics and virtues which make the Principles of Ethics difficult to define in exact terms. To be sure, while life generally certainly becomes more complex and complicated, honor and honesty do not fundamentally change. I have myself posed a few queries and problems to the Judicial Council in regard to certain procedures that seemed to me to involve medical ethics. I have argued somewhat strenuously at times, I fear. But the thoughtful thoroughness of the Judicial Council has convinced me that the code represents the general philosophy of medical ethics and that when and if revision is indicated the Judicial Council will present it to this House.

The American Medical Association belongs to the medical profession of the United States of America. It is a pleasure to report to all Fellows through the House of Delegates that it is my considered opinion that the House of the Association is in good order. I can certify that the funds of the Association are sedulously guarded, that expenditures are made carefully. Although the Association seems prosperous to the point of affluence, that I fear is more apparent than real. With the termination of the war and the resumption of normal programs which have an inevitable tendency to expand, the seeming prosperity may not be very real. In any event up to the present no money has been spent which the Association didn't have and no money has been spent just because the Association had it.

It is always amazing that so many Fellows of the Association give so freely of their time and energy to the Association. Most of them are the unsung privates in the infantry. But it is that loyalty and that devotion which makes the American Medical Association the great organization that it is today, and it is my belief that it will be even greater tomorrow.

(To be continued)

Washington Letter

(From a Special Correspondent)

Dec. 10, 1945.

Director of Veteran Hospital Planning

Major Gen. Paul R. Hawley, acting surgeon general of the Veterans Administration, announced the appointment of Lieut. Col. Harry E. Brown of Minneapolis to be acting director of the Hospital Planning and Operation Service of the Veterans Administration. Major responsibility will be the administering of the Veterans Administration's ninety-seven hospitals under the new plan of separating administration from medical service. He also will be in charge of planning new hospital sites, acquisition of army and navy hospitals declared surplus and enlargement of existing hospitals.

The Proposed Washington Medical Center

Expansion of Washington's privately owned hospital system through creation of a large hospital center in the national capital, with district hospitals donating one third of the expense, is being investigated further by the House District Committee and Senator Millard Gydings, Democrat of Maryland, Major General Fleming, Federal Works Administrator, Representative Sol Bloom, Democrat of New York, Dr. Hugh Cummings, director of Columbia Hospital, Charles A. Garrett and Samuel H. Kauffman, members of the Emergency Hospital board, William R. Castle of the Garfield Hospital board and Dr. William A. Morgan and Rev. Charles Warner. Veterans officials reveal that a proposed new veterans' hospital for the capital will be built near Walter Reed Medical Center.

Influenza Cases Top Five Year Average

Incidence of influenza throughout the United States is higher than the average of the last five years, boosted by an unusually large number of cases in six states, Texas, South Carolina, Virginia, Colorado, Indiana and Utah. Brock C. Hampton of the United States Public Health Service explained that there were "no reports of any explosive outbreaks of epidemic proportion." The United States Public Health Service is watching with interest the effects of the Army's program to use a new vaccine on 7,000,000 men.

Official Notes

THE SCIENTIFIC EXHIBIT, SAN FRANCISCO SESSION

The Committee on Scientific Exhibit of the Board of Trustees has completed preliminary arrangements for the Scientific Exhibit to be held in connection with the San Francisco session, July 1 to 5, 1946. Prospective exhibitors should start making their plans as early as possible for the meeting.

Application blanks for space in the Scientific Exhibit may be obtained from the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago 10.

MENTAL HYGIENE TRANSCRIPTIONS READY DECEMBER 15

The Bureau of Health Education announces a new series of electrically transcribed radio health programs on the subject of mental hygiene entitled "Why Do You Worry?" available December 15.

This series of programs is in dramatized form. There are thirteen episodes each dealing with a common everyday adjustment to healthful living. Each program is summarized by a psychiatrist who was originally requested to furnish the basic material for the program and to check the script before it was recorded. The series was prepared under the general supervision of the Bureau of Health Education with the cooperation of Dr. Jules H. Masserman, Department of Psychiatry, University of Chicago, who acted as general consultant and also summarized two of the programs. Scripts were written by William J. Murphy and the dramatizations were produced by Norman Felton; Messrs. Murphy and Felton are respectively script writer and producer for the A. M. A.-N. B. C. network programs Doctors Look Ahead and the forthcoming series Doctors at Home. Music for the transcriptions is by Hammond organ, with Elwyn Owen the organist. Actors and sound effects and recordings are by the National Broadcasting Company; narration is by Dr. W. W. Bauer.

Following are the lists of program topics, titles and summarizing physicians:

1. Infant, *Bringing Up Baby,* Dr. C. Anderson Aldrich.
2. Preschool, *Toddlers Learn Fast,* Dr. George Mohr.
3. In School, *First Days of School,* Dr. Adrian Vander Veer.
4. Adolescence, *Threshold of Life,* Dr. Maxwell Gitelson.
5. Mental Health of the Adult, *The Road Ahead,* Dr. Franz Alexander.
6. Marriage Adjustment, *Early Adjustments in Marriage,* Dr. George Stevenson.
7. Finding a Job, *Finding the Right Job,* Dr. David Slight.
8. Job Adjustment, *The Job Ahead,* Dr. Burleigh Gardner.
9. Alcoholism, *Paying the Piper,* Dr. Kindwall.
10. Selecting a Life Partner, *Selecting a Life Partner,* Dr. E. W. Burgess.
11. Making Marriage Work, *Making Marriage Work,* Dr. Jules H. Masserman.
12. Depressions, *Trouble in Middle Life,* Dr. Francis Gerty.
13. People We Dislike, *People We Dislike,* Dr. Jules H. Masserman.

These transcriptions will be lent in the same manner as other transcribed material made available by the Bureau. Full information on request.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

CALIFORNIA

Von Urban Loses Reappointment as County Psychologist.—Dr. Rudolph Von Urban, "adviser on sexual problems" for forty-eight years, lost his job as psychologist of Monterey County in September, when members of the board of supervisors failed to reappoint him. Newspapers reported that members of the board declared that they were "frantic" from complaints by taxpayers who resent Von Urban's sex talks before service clubs. In 1944 Von Urban was acquitted of charges that he had practiced medicine without a license. He had been brought into court on a complaint of an investigator for the state board of medical examiners, the state contending that he had been trained as a physician in his native Vienna, had practiced medicine there for many years and therefore was acting as a doctor when he set out to advise Monterey County women. In his defense, Von Urban is said to have defined "sexology" as the "science of occurrence in the soul which teaches people to understand sex instincts" (THE JOURNAL, June 10, 1944, p. 439).

Research Study Club.—The fifteenth annual midwinter postgraduate clinical assembly in ophthalmology and otolaryngology will be conducted by the Research Study Club of Los Angeles, January 21-February 1. Special courses in applied anatomy and cadaver surgery of the head and neck will be conducted February 1-5. Guest speakers will include:

Dr. Oliver E. Van Alyea, Chicago, Clinical Aspects of Otolaryngology.
Dr. Meyer Wiener, St. Louis, Surgery of the Eye.
Dr. Frederick C. Cordes, San Francisco, More Recent Advances in Ophthalmology.
Irving B. Lueck, B.S., Rochester, N. Y., Analysis of Various Optical Problems, with Special Reference to Lenses.
Dr. Herbert M. Evans, Berkeley, Calif., Recent Advances in Nutrition in Relation to Eye, Ear, Nose and Throat Problems and in Reference to Nicotinic Acid and Riboflavin Deficiencies in Man.
Dr. William J. Kerr, San Francisco, Care of the Common Cold.
Dr. Richard Waldapfel, Grand Junction, Colo., The Advancement of Otolaryngology.
Dr. Samuel Salinger, Chicago, Pathology of the Nasal Sinuses and Procedures for Facial and Nasal Reconstruction.
Dr. Samuel Fomon, New York, Plastic Surgery, with Special Emphasis on Physiology of the Nose.
Dr. Charles E. Kinney, Cleveland, Recent Advances in Surgery for the Hard of Hearing.
Vern O. Knudsen, Ph.D., Los Angeles, Studies in the Field of Hearing and Hearing Impairment.

The American Board of Ophthalmology will conduct an examination in Los Angeles January 28-February 1. The address of the research club is 635 South Westlake Avenue, Los Angeles 5.

DELAWARE

Society News.—The New Castle County Medical Society was addressed November 20 by Drs. Victor H. Vogel, Washington, on "Vocational Rehabilitation and the Medical Profession," and Robert F. Welty, Philadelphia, "Recent Advances in the Treatment of Intestinal Obstruction." Senator James M. Tunnell, Georgetown, addressed the society recently on "Wartime Health and Education and Its Significance in Peacetime Medical Care." Dr. William F. Rienhoff, associate professor of surgery, Johns Hopkins University School of Medicine, Baltimore, addressed the society October 16 on "The Present Status of the Surgical Treatment of Disease in the Thyroid Gland."

GEORGIA

New Gastrointestinal Clinic.—A state gastrointestinal clinic has been opened in the outpatient department of the University Hospital, University of Georgia School of Medicine, Augusta. The new unit will be a division of the cancer clinic of the University Hospital, designed primarily as a diagnostic gastrointestinal clinic with the main objective being the early diagnosis of cancer of the gastrointestinal tract. The clinic will be available to every one. Any one with gastrointestinal symptoms will receive an adequate examination without any fee. It has been noted that a very large percentage of the patients who arrive at the University Hospital with gastrointestinal disease are in a very advanced stage of the disease, many arriving too late for any hope of cure. Because one of the arguments of both patient and physician is that patients with comparatively minor complaints feel they cannot afford the expense of a thorough examination, it is hoped that the new clinic will serve to bring this group to early attention. The *Journal of the Medical Association of Georgia* states that it is not generally known that from 25 to 30 per cent of all carcinomas are primarily in the stomach. The fact that probably only 5 to 8 per cent of these cancers are curable and that 38,000 people die of cancer of the stomach each year is largely due to a delay in diagnosis. The *Journal* states that until the public has been educated to the importance of seeking medical attention when they have had any gastrointestinal symptom, no matter how minor, for two weeks without any apparent cause, and until the medical profession as a whole feels that these patients are candidates for thorough examinations with the possible diagnosis of cancer considered, until proved otherwise, cancer of the gastrointestinal tract will continue to take a high toll of human life. Additional information concerning the new clinic may be obtained from the University of Georgia School of Medicine, Augusta.

ILLINOIS

Southern Illinois Election.—Dr. Charles D. Nobles, Anna, was elected president of the Southern Illinois Medical Association at its recent meeting in Mount Vernon. Other officers are Drs. Willis I. Lewis, Herrin, vice president and Thomas B. Williamson, Mount Vernon, secretary-treasurer. The next annual meeting of the association will be held in Anna.

Chicago

Personal.—Dr. Herman L. Kretschmer, Past President of the American Medical Association, was recently elected chairman of the board of editors of the *Journal of Urology*.——Dr. William H. Cassels has been promoted from associate professor of anesthesia to professor of anesthesia at the University of Illinois College of Medicine.

The McArthur Lecture.—The twenty-second Lewis Linn McArthur Lecture of the Frank Billings Foundation will be delivered at the Palmer House, February 22, by Dr. Armand J. Quick, professor and director of the department of biochemistry, Marquette University School of Medicine, Milwaukee. His subject will be "The Coagulation of the Blood: Theoretical and Practical Aspects."

Administrative Director of Hektoen Institute Named.—At the recent annual meeting of the board of trustees of the Hektoen Institute for Medical Research of the Cook County Hospital, Dr. Samuel J. Hoffman was appointed administrative director of the institute. Dr. Karl A. Meyer is president of the board. Dr. Steven O. Schwartz, hematologist for Cook County Hospital, was appointed hematologist to the Hektoen Institute.

LOUISIANA

Million for Tropical Medicine.—Tulane University of Louisiana School of Medicine, New Orleans, has received a bequest from Miss Sarah Henderson of $1,075,000 for endowment of the chair of tropical medicine and for the improvement and changes in the department.

Appointments at Tulane.—William B. Wendel, Ph.D., associate professor of chemistry at the University of Tennessee College of Medicine and School of Biological Sciences, has been appointed professor and head of the department of biochemistry at Tulane University of Louisiana School of Medicine, New Orleans. Dr. Champ Lyons, formerly a member of the staff of Harvard Medical School and recently consultant to the secretary of war, Hemolytic Streptococcus Commission, has been appointed associate professor of surgery at Tulane.

MARYLAND

The Seton Institute.—Mount Hope Retreat, Baltimore, is undergoing a reorganization that includes a change in name and an extension of service for mental care. The name Mount Hope Retreat will be discontinued and henceforth the organization will be known as the Seton Institute. As part of the reorganization plan there is to be established an entirely new section in the institution as an "acute service." This section will be set up for the care and treatment of the milder emotional disorders. It will consist of four separate units of about 20 beds each, most of which are to be in private rooms, some with private baths. Each unit will be under the supervision of a competent psychiatrist with an adequate staff of graduate nurses, occupational therapists, physical therapists, recreational technicians and trained attendants. The plans of the Seton Institute include what is said to be unprecedented policy in the psychiatric field. An active staff is to be created similar to such staffs in general hospitals. Psychiatrists elected to

the active staff will have the privilege of admitting their private patients to the Seton Institute and to treat them personally according to the privileges and advantages now enjoyed by the general practitioner, the internist and the surgeon in the general hospital. It is the intent of the governing authorities and the medical advisory board to set up, as rapidly as possible, the professional and personnel standards of the entire institution so as to equal those of the highest psychiatric requirements. It plans to provide facilities for the training of psychiatric interns and for the three years of postgraduate service required of the specialists certified by the American Board of Psychiatry and Neurology. A medical advisory board consists of Dr. Wendell S. Muncie, Baltimore, chairman; Dr. Horace K. Richardson, Baltimore, secretary; Dr. Lewis B. Hill, Baltimore; Dr. Arthur J. Lomas, Lutherville; Dr. Ralph C. P. Truitt, Baltimore, and Dr. Esther L. Richards, Baltimore. A clinical director is to be appointed, and applications from candidates for this position are now invited. Applications may be forwarded to Dr. Richardson, secretary, 11 East Chase Street, Baltimore 2.

MICHIGAN

Seeks Oldest Physician in State.—The Michigan State Medical Society has recently issued a questionnaire to local secretaries in an effort to locate the oldest doctor of medicine in the state, whether a member of the society or not. The society plans a feature article on the oldest practitioner in a forthcoming issue of its state journal.

Personal.—Dr. Walter J. Cree, Detroit, who holds emeritus membership in the Michigan State Medical Society and the Detroit Academy of Medicine, was guest of honor at a luncheon held in conjunction with the Seniors Meeting of the Wayne County Medical Society, Detroit, October 17.——Dr. and Mrs. Holton M. Lowe, Battle Creek, celebrated their fiftieth wedding anniversary August 14.

Diagnostic Centers for Rheumatic Fever.—Nine diagnostic centers for rheumatic fever control are being organized in the cities of Ann Arbor, Bay City, Flint, Grand Rapids, Jackson, Kalamazoo, Lansing, Marquette and Traverse City under the auspices of the Michigan State Medical Society and the county medical society in whose area the project will be located. These are in addition to the cardiac centers maintained in Detroit. The work is to be limited to consultation and diagnostic service. No treatment will be permitted. No charge will be made to indigents for consultation service, the Michigan Crippled Children Commission assuming the cost of these fees. Private patients will be charged. All cases are to be reported to the Michigan Department of Health, and accurate records and follow-up reports are to be kept. All treatment services are to be given by the family practitioner.

NEBRASKA

New Director of Venereal Disease Control.—Dr. Walter B. Quisenberry, who recently completed a course at the Johns Hopkins School of Hygiene and Public Health, Baltimore, has been appointed director of the state division of venereal disease control, succeeding Dr. Reginald A. Frary, Lincoln, who resigned in November 1944 (THE JOURNAL, Dec. 23, 1944, p. 1095) to enter private practice in Monroe, Mich. Dr. Quisenberry graduated at the College of Medical Evangelists, Loma Linda-Los Angeles, in 1941.

Personal.—Dr. John R. Schenken, formerly professor and head of the department of pathology and bacteriology, Louisiana State University School of Medicine, New Orleans, has been appointed director of laboratories at the Nebraska Methodist Hospital, Omaha.——Rev. Emil G. Chinlund, for more than twenty-five years director of Immanuel Deaconess Institute, Omaha, has resigned but will remain in office for the remainder of the current year.——Dr. William E. Holmes, Omaha, has been named director of the Scotts Bluff County Health Department.

NEW YORK

Drive Against Antivivisectionists.—The Medical Society of the State of New York, at the recent meeting of its house of delegates, urged the appointment of a special committee to determine and formulate on a statewide basis an effective educational and defensive program to combat the growing antivivisection threat. The action was the result of a resolution introduced by the Medical Society of the County of Erie, which has a newly created committee for the defense of medical research. The resolution recommended that every county medical society in the state establish without delay a similar committee. It has pointed out that the preservation of animal experimentation may well be maintained through the agency of a statewide network of county defense committees working in unison and efficiency under the guidance of an overall state society group.

Fellowships in Public Health.—The New York State Department of Health has available a limited number of fellowships for physicians returning from service who wish to equip themselves with the necessary field and academic experience for the practice of civilian public health on a full time basis. Six to twelve months of orientation and field work are provided under the guidance of experienced district state health officers, followed by an academic year at a postgraduate school of public health where the master's degree in public health is earned. Fellowship provisions are generous and include tuition. Those completing the training are professionally qualified for appointment on the staff of most local and state health departments. Additional information concerning necessary requirements may be obtained from the New York State Department of Health, Albany 1.

New York City

The Harvey Society Lecture.—George Wald, Ph.D., associate professor of biology, Harvard Medical School, Boston, will deliver the third Harvey Society Lecture of the current series at the New York Academy of Medicine on December 20. Dr. Wald will speak on "The Chemical Evolution of Vision."

Deaths from Carbon Monoxide.—More than six hundred accidents resulting from escaping gas containing carbon monoxide were reported to the New York State Department of Health in 1944. Of these, 314 terminated fatally. During the first nine months of 1945 preliminary totals show that 225 persons were killed by poisonous gases.

Faculty Changes at Long Island.—Dr. Phillips F. Greene, clinical professor of surgery, Long Island College of Medicine, has been appointed associate dean in charge of the administrative office of the college division at Kings County Hospital. Dr. Greene was formerly professor of surgery and dean of the Yale-in-China National Huing Ya Medical College in Changsha, China. Dr. Duncan W. Clark, Brooklyn, was also named associate dean, according to the *Bulletin* of the Long Island College of Medicine.

Friday Afternoon Lecture Series.—The twentieth series of Friday Afternoon Lectures of the New York Academy of Medicine, which began November 2 (THE JOURNAL, September 29, p. 371), continues as follows:

Dr. Richard H. Freyberg, Current Views of Rheumatic Diseases and Their Management, January 4.
Dr. Fordyce Barker St. John, Cancer of the Stomach—Surgical Aspects and Means for Early Diagnosis (the L. Duncan Bulkley Lecture), January 11.
Capt. Arthur M. Master (MC), Apical Systolic Murmurs in Incipient Rheumatic Heart Disease, January 18.
Dr. Samuel Silbert, Medical Treatment of Peripheral Vascular Disease, January 25.
Dr. Williams Andrus, Present Concepts of Treatment of Burns, February 1.
Dr. Solomon Fineman, Roentgenologic Aspects of Diseases of the Heart and Lungs of Importance to the General Practitioner, February 8.
Dr. Henry E. Meleney, Diagnosis and Treatment of Malaria, February 15.
Dr. Robert H. E. Elliott Jr., Disorders of the Spleen, with Special Reference to Those Amenable to Surgical Therapy, March 1.
Dr. James William Hinton, The Indications for Surgery in the Treatment of Gastric and Duodenal Ulcers, March 8.
Dr. Lawrence S. Kubie, Rehabilitation of the Psychiatric Convalescent, March 15.
Dr. Henry L. Jaffe, Fibrous Dysplasia of Bone, March 22.
Dr. Dana W. Atchley, Treatment of Neuroses by the Internist, March 29.
Dr. Ephraim Shorr, Metabolic Aspects of Renal Stone Formation, April 5.

OHIO

Payment to Physicians for Furnishing Affidavits to Industrial Commission Rescinded.—When the Ohio Industrial Commission adopted a revised medical and surgical fee schedule, effective last May 1, it provided for a fee of $3 for "affidavits furnished by physicians upon request of the commission containing information used as a basis for adjudication of the claim." This was done on recommendation of the Ohio State Medical Association (THE JOURNAL, June 23, p. 605). This provision was rescinded by action of the commission on October 15 and such revocation took effect on October 28. All fee bills for furnishing such affidavits at the request of the commission received and approved by the commission prior to the rescinding of that section of the fee schedule will be paid, but bills received after that date will be rejected. According to members of the commission, this action was necessary because of a combination of circumstances which left the commission without resources to meet

such payments. It had been anticipated that such fees would be paid out of the funds from which compensation and medical, hospital and nursing expenses are paid, namely the state insurance fund, consisting of premiums paid by employers. However, the attorney general on July 19 ruled that a fee for affidavits could not be legally charged against the insurance fund but must be considered a part of administrative expenses.

OKLAHOMA

Richard Graham Returns as Executive Secretary.—Richard H. Graham, who recently was relieved from military service, has resumed his activities as executive secretary of the Oklahoma State Medical Association.

Bert Caldwell Makes Hospital Surveys.—Dr. Bert W. Caldwell, Chicago, former executive secretary of the American Hospital Association, has been engaged to make a survey for the state board of health of the hospital facilities of Oklahoma.

PENNSYLVANIA

Personal.—Dr. William Ford, member of the medical staff at the Lewisburg Federal Penitentiary since 1938, has been appointed chief medical officer, to succeed Dr. Edward C. Rinck.

Philadelphia

Faculty Changes at Woman's Medical College.—Among recent changes in the faculty at Woman's Medical College of Pennsylvania are the following:

Dr. Margaret DeRonde, Norristown, Pa., to clinical associate professor in psychiatry.
Dr. Mary R. Curcio to clinical assistant professor of medicine.
Dr. Mildred C. J. Pfeiffer to clinical assistant professor of medicine.
Maria Wiener, Ph.D., to assistant professor of bacteriology.
Dr. F. Marin Williams to clinical assistant professor of gynecology.

Philip White Joins Research Institute.—Philip R. White, Ph.D., since 1938 associate in the department of animal plant pathology, Rockefeller Institute, Princeton, N. J., has resigned to become a member of the staff of the Institute for Cancer Research at Lankenau Hospital Research Institute, according to *Science*. Dr. White, who was to take up his new work December 1, will organize and direct a division of general physiology and tissue culture dealing with problems in tumor growth.

Bequest for Medical Care.—The University of Pennsylvania Hospital and Dr. John Diven, Philadelphia, are each bequeathed $50,000 for free hospital care and medical attention to indigent persons in the will of Mrs. John Scanlin Scott, a widow, formerly of Philadelphia, who died recently in New Philadelphia, Ohio. Mrs. Scott wrote "I make the bequest to Dr. Diven so that he may carry out plans which he and I have discussed for the benefit of poor children who are in need of medical or other care and attention." The university's trustees are to administer the hospital's gift trust fund, the income of which will provide full maintenance of two beds every day in the year.

Personal.—Lieut. Col. Pascal F. Lucchesi, who for the past twenty-two months has been in Uruguay as chief of a health and sanitation mission for the Commission of Inter-American Affairs, has been released by the army and has resumed his duties as superintendent and medical director of the Philadelphia Hospital for Contagious Diseases.——William L. Hughes, Ph.D., professor of physical education, Teachers College, Columbia University, New York, and president of the American Association for Health, Physical Education and Recreation, has been appointed director of the health and physical education department of Temple University. Among other activities he has been a consultant for the postwar health and athletic facilities planning committee of the Philadelphia public schools.—— Dr. Harvey Bartle, formerly medical director Pennsylvania Railroad System, has been named medical director at the Cramp Shipbuilding Company. He will succeed Dr. Kenneth A. Koerber, who resigned to become medical director at the Electric Storage Battery Company.—— Dr. Mario A. Castallo, associate professor of obstetrics, Jefferson Medical College, on October 28 received an honorary degree of doctor of science from Holy Cross College, Worcester, Mass.——Dr. John A. Bertolet, treasurer of the Philadelphia County Medical Society, was elected coroner of Philadelphia County recently. Dr. Bertolet has been filling this office by appointment from the governor since the death of his predecessor, Dr. Herbert M. Goddard.

TENNESSEE

Personal.—Dr. Walter J. Johnson, Pulaski, has been appointed a member of the Tennessee State Board of Medical Examiners, succeeding Dr. James H. Keeling, Knoxville, who died September 1.——Dr. Marion G. Fisher, Jonesboro, has resigned as director of the Washington County-Johnson City health department to accept a similar position of the Lorraine County (Ohio) health department with headquarters in Oberlin, it is reported.

Cancer Clinic Open.—The Memphis Cancer Clinic was opened for patients October 1. It is under the direction of Dr. Douglas H. Sprunt, professor and head of the department of pathology, University of Tennessee College of Medicine, Memphis. It will be operated jointly by the Field Army, University of Tennessee, John Gaston Hospital and Shelby County Medical Society. Facilities will be at Gailor Clinic for diagnosis and recommendation for treatment.

Resolutions Honor Service to Medical School.—Resolutions paying tribute to Dr. Waller S. Leathers and Dr. Lucius E. Burch for their long service to the Vanderbilt University School of Medicine, Nashville, were adopted October 31 at the first fall meeting of the school faculty. Dr. Leathers, who retired in July, had been dean of the medical school and head of the department of preventive medicine and public health since 1928 (THE JOURNAL, June 23, p. 606). Dr. Burch, who also retired June 1 (THE JOURNAL, July 15, p. 820), graduated at Vanderbilt in 1896, joined the faculty in 1902 as professor of gynecology and was dean of the school from 1914 until 1925, when he resigned as dean to continue as head of the department of obstetrics and gynecology.

TEXAS

Hospital Receives Bequest for Pathologic Research.—The Hermann Hospital, Houston, will receive an income from Houston real estate valued at more than $200,000 under a bequest by the late Dr. Oscar L. Norsworthy, first chief of staff at the hospital, who died Jan. 5, 1935. The fund will be used for pathologic research.

Seminar on Carcinogenesis.—Edmund V. Cowdry, Ph.D., professor of anatomy, Washington University School of Medicine, St. Louis, and director of research of the Barnard Free Skin and Cancer Hospital, will hold a special seminar on carcinogenesis at the Tumor Clinic of the University of Texas Medical Branch, Galveston, December 21.

Southwestern Medical Foundation Seeks Operating Fund.—The Southwestern Medical Foundation has opened a drive to secure $1,300,000 for a five year operating fund. This fund is entirely separate from the building fund, for which $1,000,000 was raised in 1943 to build a medical college in Dallas adjacent to the city-county hospital. An enlarged medical program in the city and county has necessitated the establishment of an operating fund. The medical college has not made demands on the city-county hospital which would increase the budget and has received no money from tax supported budgets. Instead, the school has contributed to the care of the sick by paying for the services of physicians who render service to indigent patients of Dallas County. Expense for this purpose amounts to $50,000 a year, which is defrayed by the foundation. In addition it carries on research programs which are available to the city-county hospital.

WISCONSIN

Personal.—Dr. and Mrs. Ulysses S. Grant Keller, Madison, observed their fiftieth wedding anniversary September 10.—— Dr. James J. Fitzgerald recently completed fifty years of service in Eagle.

District Society Honors William Middleton.—The Third Councilor District Medical Society devoted a recent meeting to honoring Lieut. Col. William S. Middleton, dean of the University of Wisconsin Medical School, Madison, who had just returned from military service. Dr. Middleton served as chief consultant in medicine for the European Theater of Operations, for which service he was awarded the Croix de guerre for "exceptional service during the liberation of France." Dr. Middleton spoke on his activities in Europe.

Annual Dearholt Day.—The sixth annual "Dearholt Day" was observed in Madison November 19 under the auspices of the Wisconsin Anti-Tuberculosis Association in collaboration with the University of Wisconsin Medical School, Madison, and the Dane County Medical Society. The speakers included Drs. Carl N. Neupert, Madison, assistant state health officer, Horton C. Hinshaw, Rochester, Minn., who discussed "Chemo-

therapy in Tuberculosis," and Leo G. Rigler, Minneapolis, "Emphysema and Atelectasis in the Diagnosis of Pulmonary Diseases." The observance honors the late Dr. Hoyt Dearholt, who is credited with founding the Wisconsin Anti-Tuberculosis Association. In Milwaukee, November 20, the observance was sponsored by the Marquette University School of Medicine, Milwaukee, and the Milwaukee Academy of Medicine. The same program was presented. The Wisconsin Trudeau Society cooperated in both events.

State Medical Election.—Dr. Charles A. Dawson, River Falls, was chosen president-elect of the Wisconsin State Medical Society at the annual meeting of the house of delegates of the Wisconsin State Medical Society in Milwaukee, October 20-21, and Dr. Patrick R. Minahan, Green Bay, was installed as president. Dr. William D. Stovall, Madison, is delegate to the American Medical Association. The 1946 annual meeting will be held in Milwaukee October 6-9. The society went on record as favoring a comprehensive surgical, obstetric and hospitalization insurance plan, which, it is estimated, will serve as full coverage for a major percentage of the workers and their families in Wisconsin. It is expected that the plan will be put into effect shortly after the first of the year. The plan will grant complete surgical coverage to employees, with dependents, having an income of less than $2,600 a year and to single employees having an income of less than $2,080 a year. For those having higher incomes the same benefits will apply, although the physicians do not guarantee that such payments constitute payment in full.

GENERAL

The March of Dimes.—January 14-31 has been designated as the annual March of Dimes of the National Foundation for Infantile Paralysis. Local chapters of the National Foundation have disbursed close to $5,000,000 this year to cope with widespread epidemics that have claimed nearly 13,000 victims this year to date, making 1945 the fourth worst poliomyelitis period in the recorded history of the disease in this country.

Dr. Cumming Observes Anniversary with Sanitary Bureau.—On December 20 Dr. Hugh S. Cumming, formerly Surgeon General of the U. S. Public Health Service, will complete his twenty-fifth year as director of the Pan American Sanitary Bureau. Dr. Cumming, when he retired as surgeon general in 1936, had completed sixteen years in this position and forty-two years as a member of the U. S. Public Health Service. On his retirement from the service, Dr. Cumming devoted his full time to the directorship of the Pan American Sanitary Bureau. To mark his twenty-fifth anniversary, the republic of Guatemala has just granted him a gold medal.

Reprints for the Devastated Medical Libraries of Manila.—In connection with its campaign to help rebuild the medical libraries of Manila which were destroyed during the Japanese occupation, the Academy-International of Medicine requests that medical authors contribute eight or ten reprints of each of their articles which have been published since 1941. They may be sent at the regular parcel post rate of 16 cents for the first pound and 11 cents for each additional pound, in care of Dr. Agerico B. M. Sison, Philippine General Hospital, Manila, P. I. Dr. Nathan S. Davis, Chicago, is president of the Academy-International of Medicine and Dentistry, which has offices in Suite 101, Liberty Building, Topeka, Kan.

Prepayment Medical Care Organizations.—The Federal Security Agency has just made available as Bureau Memorandum number 55 the third edition of its work entitled "Prepayment Medical Care Organizations." The pamphlet may be secured from the United States Government Printing Office at 25 cents a copy. It contains a complete survey of all prepayment medical care organizations which made information available to the Social Security Board up to March and April 1945. A statistical summary provides information concerning each state, the type of plan, the number of persons eligible for service, the number of physicians and nurses associated with the plan and the types of service provided.

Warning of Forger.—William B. Pierce is wanted by the police for larceny, fraudulent conversion and forgery at the Philadelphia General Hospital. According to a warrant issued by the police department, Pierce is said to have qualifications to fill almost any position in a hospital. He is a good artist and can operate cardiographic equipment with ease. He is a former convict, having served time for the charges of forgery and larceny of government property, and at present is a parole violator. Since he is known to have worked in large hospitals in major cities, staff members and employers of hospitals are asked to be on the lookout for him. Should he make his appearance, persons are requested to notify the local police department, post office inspectors or the F. B. I.

Nutrition Grants.—New grants of $120,565 were announced by the Nutrition Foundation at a meeting of the board of trustees at the Waldorf Astoria, New York, November 8. The new grants bring the total for fundamental research for science of nutrition made by the foundation up to $1,041,755. Included among the new grants are the following:

Stanford University received $5,000 for a two year study of the distribution of body protein under changing conditions.

Yale University received $5,000 for a two year study of the chromatographic adsorption analysis of fatty acids and carbohydrates.

The University of Wisconsin received $10,500 for a three year study of the effect of dietary components on the requirement of amino acids.

The University of Toronto received $8,000 for a two year study of the relation of carbohydrates to inositols.

Tulane University received $4,250 to study nutritional anemia in man.

The University of California received $2,400 for a two year study of the metabolism of amino acids in the chick.

Pennsylvania State College received $10,000 for a two year study of spectrographic methods of estimating vitamin A and provitamin A.

Cornell University received $7,000 for a two year study of the function of essential nutrients.

Duke University received $4,000 for a two year study of fatty livers and choline deficiency in the guinea pig.

Northwestern University received $12,000 for a two year study of the human requirements of niacin and related nutrients.

Growth Committee Has Central Office.—The Committee on Growth, recently formed within the Division of Medical Sciences of the National Research Council as a result of action by the American Cancer Society, has established a central office in the Washington headquarters of the council where information on all phases of cancer research will be assembled and from which reports may be distributed to interested investigators. The Committee on Growth wishes to call the attention of interested investigators to the following major principles by which it will be guided as far as possible in its sponsorship of research and training programs:

Desirability of long-term grants to projects of major importance.

Grants, where possible, of such magnitude as to permit individual investigators to appoint associates for long-term training periods.

Granting of fellowships to institutions for training of workers to acquire new technics and wider experience.

Maintenance of continuing individual contact with workers in the field.

Provision, on a participating basis, for continuing economic security for professional workers.

Liberal attitude toward the investigator's work, his publication and reports.

Formation of the committee on growth and its officers were reported in THE JOURNAL, June 23, page 607. The Committee on Growth may be reached through the Division of Medical Sciences, National Research Council, 2101 Constitution Avenue, Washington 25, D. C.

Production of Penicillin.—Although production of penicillin dropped in September, production in October increased, members of the Penicillin Producers Industry Advisory Committee reported to the War Production Board October 31. Actual production of penicillin in the third quarter (in billions of units) was 688.98 in July, 636.51 in August and 586.37 in September. Estimated production in the fourth quarter is 61.47 in October, 657.96 in November and 698.10 in December. The decreased production in September resulted from the poor quality of corn steep liquor received by the penicillin producers. The poor quality was caused by the fact that the only corn available was of an inferior grade. Although the industry has made provision for further purification of the corn steep liquor at the plant, the War Production Board is taking steps to arrange for the production of a higher grade of corn steep liquor. WPB officials suggested that expert controls on penicillin should be restored to enable records to be kept of the quantities of penicillin leaving the country. The department of commerce and members of the committee concurred in this suggestion. So that hospital requirements for penicillin in all forms may be met in full, WPB officials and the committee agreed that an order or directive should be issued giving hospitals first call on penicillin production.

CORRECTION

Frederick Eugene Porter Not Dead.—THE JOURNAL, December 1, page 978, inadvertently reported the death of Capt. Frederick Eugene Porter (MC), U. S. Navy (ret.). The report of death was confused with that of a person having a similar name but who is not licensed to practice in California. Dr. Porter is commanding the U. S. Naval Special Hospital, Santa Cruz.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Nov. 10, 1945.

The Coordinating of Research on Rheumatic Fever and Heart Disease

The annual Harveian Oration, founded by Harvey in 1656, was delivered at the Royal College of Physicians by Dr. John Parkinson, cardiologist, who spoke on rheumatic heart disease. Rheumatic fever in childhood is the main source of heart disease up to the age of 40. The damage occurs between the ages of 5 and 15 years and exceeds tuberculosis as a cause of death up to the age of 20. It is estimated that almost one tenth of all rejections for war service were due to heart disease. The economic loss can be judged by the fact that the duration of economic activity of affected men is no more than ten years on an average. It is agreed that poverty and overcrowding are basic causes; rheumatic fever is rare in the children of the well-to-do. There is almost unanimous opinion that compulsory notification of rheumatic fever is essential to progress, for it permits early diagnosis before heart disease has occurred. The excellent scheme now in operation by the London County Council is regarded in the United States and elsewhere as the most comprehensive in existence. But institutional treatment from the outset and subsequent supervision have to be extended to every case of rheumatic fever. There should be created a rheumatic fever committee to coordinate research and plan for the future. Dr. Parkinson believes that the Royal College of Physicians is prepared to assume leadership in this organization. The objective should include one main county hospital for research and hospitals and clinics to serve all densely populated areas. Ultimately it will be found necessary, as it has been in the United States, to create a national council for rheumatic fever and heart disease.

"Acroparesthesia" of the Hands

Dr. F. M. R. Walshe, a neurologist, has shown that the "acroparesthesia" of the hands and arms in women, which is generally diagnosed as "neuritis," has a simple mechanical explanation (*Brit. M. J.* **2**:596 [Nov. 3] 1945). During the war he has seen an unusual number of such cases. The largest group consists of middle aged or elderly women normally unaccustomed to full house work but obliged to undertake it during the war. The other group consists of younger women who, in addition to their house work, have done part time work in industry or have had the burden of child care. There was a gradual onset of intense numbness and tingling in the hands and fingers, which was greatest on waking in the morning, when the fingers were clumsy and weak. By the time the patient had dressed, the symptoms had diminished but the fingers remained uncomfortable and less nimble than normal. At the end of the day the symptoms increased again. During the night burning pain and paresthesia in the fingers might awaken the patient. In other cases night brought relief. Treatment which consisted of the administration of vitamins or physical therapy was not satisfactory.

On physical examination these patients showed general indications of chronic fatigue. The musculature was atonic and often the shoulder girdles were remarkably low. Muscular wasting was not present, but also always there was tenderness of the extensor muscles in the forearm and sometimes of the thenar and adductor muscles of the thumb. Objective sensory loss was exceptional; there might be some dulling of sensibility of the fingers. Occasionally there was cyanosis or pallor of the fingers.

This condition is a rib pressure syndrome but is not due to a rudimentary seventh cervical or first thoracic rib but to a normal first rib. Atony of the muscles leads to lowering of the shoulder girdle with traction and compression of the lower trunk of the brachial plexus, which may be caught as in a vise. Whereas the pressure syndromes due to a rudimentary cervical or first thoracic rib are usually unilateral because the thoracic outlet is commonly asymmetrical, the normal first rib syndromes are bilateral because the thoracic outlet is symmetrical and the sagging of the shoulder girdles—dependent on general loss of muscular tone—is also bilateral. If the symptoms are more apparent on one side, it is usually the right, because the right hand is more heavily used than the left. Rest in bed or simple cessation of mechanical work gives immediate relief. This view of the etiology of acroparesthesia is not new and has been presented by other writers in the past, notably by Wartenberg (1936, 1944). It has been overlooked by clinicians, and failure to understand the cause of the paresthesia leads to futile treatment. However, the connection of the paresthesia with fatiguing work of women during the war appears to be quite new.

BELGIUM

(From a Special Correspondent)

Nov. 3, 1945.

Therapy of Arteritis of the Lower Extremities

In the discussion on endarteritis obliterans before the Belgian Society of Physical Therapy Williams pointed out that spasm is an important factor. The therapy of the condition has three objects: to counteract infection, to establish a sufficient collateral circulation and to remove or attenuate pain. The physical therapeutic methods employed are irradiation and diathermy, which are especially indicated in spasm. However, diathermy may aggravate the pain. Infra-red rays, light baths and dry warm air are especially effective in endarteritis obliterans. The collateral circulation can be favorably influenced by an apparatus which exerts rhythmic pressure variations on the involved member. Pressures between 20 and 80 mm. of mercury are exerted, depending on the nature of the case. This procedure leads to permanent dilatation of the collateral arterioles and it aids in the reestablishment of the normal circulation of the skin. In cases of permanent spasm it is advisable to combine this method with lumbar sympathectomy.

The Medullary Route in Metallic Osteosynthesis

At a meeting of the Belgian Society of Surgery, Soeur presented Kuntscher's technic of nailing by the intramedullary route. He demonstrated the instruments employed and showed twelve old fractures of the extremities that had been treated between 1943 and 1945. There were four fractures of the bones of the forearm, two of the humerus, three of the tibia and three of the femur; all were diaphysial. Soeur stressed the simplicity of the technic and the excellent results. The essential points of the method are good reduction, perfect maintenance and early mobilization. The nails are removed three to six months after their introduction.

Reunion of English, French and Belgian Surgeons

At a meeting of the Association of Surgeons of Great Britain and Ireland several Belgian surgeons extended to our French and British friends an invitation to renew associations after the cruel years of separation caused by the German occupation of the major part of Europe. This reunion took place in Liége on July 6 at the Hôpital de Bavière in the services of Professors Albert and Orban and on July 7 in the new surgical unit of the Hôpital d'Etterbeek, where Professor Leriche performed a resection of the lumbar sympathetic nerves.

Technic of Secondary Partial Gastrectomy

Deloyers and Govaerts reported before the Surgical Society of Belgium results obtained in 27 cases of secondary partial gastrectomy. In greatly debilitated patients it is advantageous to perform the operation in two stages; the gastrectomy is not done until three months after the first stage, which involves restoring the continuity of the jejunum by end to end anastomosis. In 19 cases the secondary partial gastrectomy was accomplished in one stage; 4 of these patients died of the usual postoperative complications. The mortality rate is much like that of von Haberer (15 per cent).

Deloyers and Govaerts advocate the extensive removal of the old stoma, gastric as well as jejunal, and insist that the new jejunal stoma be placed below the sutures of the old excision. The technic employed is the Reichel-Polya type; it gives entirely satisfactory results, because it effects excellent emptying but completely eliminates the secretory area of the stomach.

GERMANY

The following medical news has been obtained through the Department of Commerce, Washington, D. C.—EDITOR.

University of Freiburg Department of Pathology

Prof. Franz Büchner, the director of the department of pathology of the University of Freiburg, was visited on May 27 at his home, Holbeinstrasse 32, Freiburg im Breisgau. He gave an account of the work of his department in considerable detail. The work he had done during the war was really an extension of his interests on the effects of oxygen deficiency on the heart muscle. In 1939 he had published a book on coronary insufficiency, Die Koronarinsuffizienz (Dresden and Leipzig, Theodor Steinkopf). He observed that severe suffocation, carbon monoxide poisoning, severe anemia and exposure to low levels of oxygen pressure were followed by a punctate necrosis in the cardiac muscle and that this was accompanied by a deformation of the ST complex of the electrocardiogram. He extended these experiments and showed that guinea pigs exposed to low oxygen pressure which finally proved fatal showed varying degrees of ganglion cell necrosis in the central nervous system, especially the medulla oblongata. In 1942 Altman and Schubothe in an article entitled "Funktionelle und organische Schädigungen des Zentralnervensystems der Katze im Unterdruckexperiment" (*Beitr. z. path. Anat. u. z. allg. Path.* **107**:1, 1942) showed that in cats the areas of the brain which were sensitive to oxygen lack, as shown by microscopic examination, were those areas which showed electroencephalographic changes under the same conditions.

Professor Büchner also remarked that in advanced cases of blood loss similar microscopic changes were found post mortem. In reply to a question as to whether Periston had been used to any considerable extent in cases of severe hemorrhage, he said that as a result of his experiments Professor Lang, the head of the Physiologisch-Chemisches Institut der Militärärztlichen Akademie in Berlin had recommended the use of serum and apparently had also organized this. Another subject which interested his department was the effect of chilling and low temperature in relation to the body glycogen. Prolonged exposure to cold causes the disappearance of the cardiac glycogen. The effects of cold and other noxious agents on the lipoid content of the adrenals have also been investigated. The lipoid content of the adrenal is most sensitive to attack. A considerable amount of work on infectious hepatitis has likewise been done and a manuscript by Kühn, one of his assistants, is awaiting publication. The manuscript appears to be well illustrated. Although it was not possible to go through it in any detail, mention is made here of its existence in case it may be of interest. Büchner mentioned that he had come across a very rare sequela to infectious hepatitis, namely cirrhosis.

ORGANIZATION OF THE LABORATORY

Professor Büchner stated that most of his staff had already been with him before the war, but a pathologic section was formed in his laboratory by the Air Ministry, and by this means he was able to keep his staff together during the war. Thus, he had four assistants for the Air Ministry section of his work and only one so-called civilian assistant. The work carried on under the auspices of the Air Ministry was mainly a continuation of his general type of research. The following list of his present staff was obtained: Dozent Dr. G. Liebegott; Dr. G. Veitly (army pathologist in Italy); Dr. H. W. Altmann, Dr. H. A. Kühn and Dozent Dr. G. Peters, located in St. Blassien since the laboratory was destroyed, and D. J. Pidrotka (Brannenburg on Inn).

CHEMICAL SECTION

After the raid of Nov. 27, 1944 a part of the laboratory which was under the direction of Dr. H. J. Staudinger (in Freiburg) was left, but the chemical section was completely destroyed. Nevertheless it had been possible to rescue most of the books and apparatus from the cellars, where they had been put for safety.

During the interrogation, Professor Büchner stated that Prof. Dr. S. Janssen, professor of pharmacology, Freiburg, Sonnhalde 14, had continued his work on the various fractions of the pituitary but had had few assistants during the war and had done no pharmacologic work for the German government.

Hygiene Institute, University of Tübingen

Prof. Otto Stickl is the director of the Hygienisches Institut of the University of Tübingen. This institute is concerned with academic teaching and research and does the routine bacteriologic testing for the Württemberg area. As many as seventy to eighty thousand tests are performed annually. The institute appeared to be well equipped, but Professor Stickl reported that some ten days previously the French authorities had removed his electron microscope, some photographic apparatus and his experimental protocols. Other apparatus, including an ultracentrifuge, still remained. Professor Stickl's main interests have been the sulfonamides, epidemic hepatitis and dibromosalicyl. He had been examining in mice the effects of the sulfonamides on intestinal and dysentery organisms, particularly with regard to the distribution of the drugs in the various body fluids, and the nature of their action on the bacteria. No outstanding results were reported. It was interesting that while he had examined Globucid, Pyrimal, Albucid and sulfapyridine, he had not examined sulfanilylguanidine or Marfanil. He considered that Globucid and Pyrimal were about equally effective (no work on penicillin had been done).

Professor Stickl had investigated a number of cases of epidemic hepatitis, which had come mainly from the eastern front, especially from Stalingrad, in 1942. In reply to a question, he stated that he had no experience with hepatitis occurring after injection of serum. Detailed protocols were not in Professor Stickl's possession.

A sample of 3:3'-dibromosalicil had been supplied to Professor Stickl by Prof. R. Kuhn of Heidelberg. The toxicity and chemotherapeutic activity of this substance against a fatal staphylococcic infection in mice had been investigated by one of Stickl's students (H. Cienger) in a doctor's dissertation. Whereas Kuhn claimed that 50 mg. daily, either by mouth or intraperitoneally, was tolerated by a 20 Gm. rat, Cienger found that a 20 Gm. mouse died almost immediately after administration of 5 mg. by intraperitoneal injection. Lower doses occasionally lengthened or saved the life of an infected mouse, but dibromosalicil was less effective than Globucid. In the mouse it was three times as toxic as Globucid. Professor Stickl saw no future in this compound for staphylococcic infections. The

compound used in these tests was not dibromosalicil alone but the boric acid complex made for purposes of solubilization.

Professor Stickl's department has done no work on tetrachlorosalicil.

Biologic-Chemical Research Laboratory

The Biologisch-Chemisches Forschungslaboratorium, F. E. Freitag, director, is in two buildings in the village of Freudental, near Konstanz. It is a private institution with funds derived from several sources, namely (*a*) royalties on Freitag patents, (*b*) grants from the firm of Lomberg G.m.G.H., the holding company of Bykopharm, Frankfort-on-main and (*c*) private contributions. The amount spent in 1944 was between 70,000 and 80,000 marks. Freitag had five qualified assistants and in addition about a dozen laboratory assistants. His present work is in the field of biologic chemistry. He claims to have evolved a purely physical, in vitro method for the measurement of anticoagulant activity, using the gelling of a synthetic sol as an indicator. In attempts to find a satisfactory anticoagulent he examined the sulfuric acid esters of cellulose, chitin, denatured collagen and a carbohydrate fraction from Chondrus crispus (Iceland moss). No completely satisfactory substance has been found. He studied under Jorpes in Stockholm for three weeks in March 1944 and at present, with Dr. Frank of Neustadt in the Black Forest, he is trying to evaluate heparin in the prevention of thrombosis.

State Hygiene Institute

The State Hygiene Institute was badly damaged. Prof. K. Kisskalt, the director, explained the method that had been started in an attempt to avoid using agar with Petri dish cultures. Use was made of the sheets of filter paper soaked in bouillon stained with fuchsin, covered with a disk of cellophane and then sterilized. This method was used in the examination of fecal samples. Work had also been started with Penicillium notatum but had not got very far. They had a considerable number of cultures giving varying yields and had worked with a company named Mack in Illertissen.

MEXICO

(From Our Regular Correspondent)

Oct. 29, 1945.

Quackery, Tuberculosis and Newspapers

Recently some of the leading newspapers in Mexico City have given extensive publicity to two notorious nostrums for the treatment of tuberculosis. Mucelydina, the first one, is a supposed sodium salt of an acid which, it is said, is obtained from cultures of a fungus of the family of Mucedinaceae. The other so-called specific is called Diasone. It consists of plain ozone, which is applied to pleural cavities and it is claimed that with such a treatment all bacilli are almost instantly killed in a consumptive patient. In both cases the inventors are an engineer or a chemist without any knowledge of medicine, supported by a physician with unknown scientific background and sponsored by a newspaperman in charge of the propaganda. Up to the present time the authors have not revealed either the species of the fungus used to prepared Mucelydina or the chemical composition and method of preparation of the product and have not presented any evidence or data concerning experiments made in the laboratory; nor have scientific data on the preparation and the method of action of Diasone been revealed.

At the beginning Drs. Donato G. Alarcón, Ismael Cossio Villegas and Miguel Jiménez, well known specialistas on tuberculosis, with the cooperation of the National Tuberculosis Association and some laboratory workers, made a study of the nostrums and reported that the experiments made in vitro, in animals and even in 30 patients were absolutely negative. The two alleged specifics did not change the status of the tuberculous lesions either in laboratory animals or in human patients, and did not reduce either the number of bacilli in the sputum or have any influence on the temperature, the blood picture or the weight of the patients. On the contrary, it was found that Mucelydina caused congestion of the lesions in the lungs and hemoptysis. Similar studies made in the "Sanatorio Esperanza" in Havana, Cuba, confirmed these findings and Dr. Francisco Nuñez Llanes, director of the institution, stated in his report that ". . . we were unable to observe even the slight improvement obtained with the regular treatment of the ailment. . . ."

Second Mexican Congress on Social Sciences

On October 12 President Manuel Avila Camacho presided over the inauguration session of the second Mexican Congress on Social Sciences, organized by the Mexican Geographic and Statistical Society of Mexico (Sociedad Mexicana de Geografía y Estadística), which is one of the oldest on the continent. On the organizing committee were Señores J. Jesus Silva Herzog, undersecretary of public finances, Gilberto Loyo, economist and statistician, and Agustín Aragón, engineer, who acted as vice presidents, and Señores Jorge L. Tamayo, engineer, and Francisco de A. Benavides, lawyer, acting as secretaries.

The congress was organized in round table discussions and sessions of the different sections. Important and interesting sections were the ones on Sociology, Education, Social Medicine, Statistics, Anthropology and the round table discussions on "Human War Problems," "Natural Resources of Mexico," "Problems of Population," "Postwar Social Problems" and "Social Medicine," which were attended by large audiences.

Course on Tropical Dermatology

As announced in THE JOURNAL, a short course on tropical dermatology for North American physicians, which was organized at the special request of Dr. Howard Fox, New York, and Leon Goldman, Cincinnati, was conducted by the Dermatology Society of Mexico and the National Faculty of Medicine, with the cooperation of the Secretariat of Public Health and Welfare. The topics considered were Tropical Characteristics of Dermatology in Mexico, by Dr. Jesus González Urueña, Pinto Disease, by Dr. Salvador González Herrejón, Onchocerciasis, by Dr. Manuel Martínez Baez, Syphilis, by Dr. Julio Bejarano, Leprosy, by Dr. Eugenio Latapí, Mycosis, by Dr. Antonio González Ochoa, Leishmaniasis, by Dr. Jorge Millán Gutiérrez, and Lymphogranuloma venereum, by Dr. Oswaldo S. Arias. For each subject a syllabus was prepared and each lecture was followed by clinics or demonstration in the laboratory. The course lasted two weeks and was attended by fifty physicians, most of them North Americans, who also visited the special wards for dermatology patients in the city hospitals, the Institute of Health and Tropical Diseases, the School of Public Health and Hygiene, the National Leprosarium in Zoquiapam, Mexico, the Lepers Clinic and the state of Guerrero, where the pinto disease prevails in certain zones. A certificate was given all students who attended the sessions regularly.

Marriages

FRANKLIN HENRY ELLIS JR., Princeton, N. J., to Lieut. Elizabeth Dunston Watson of Great Neck, L. I., November 17.

WILLIAM TOWNSEND DAVISON, Durham, N. C., to Miss Mildred McCarthy of Fairhaven, Mass., November 14.

EDWARD B. BENEDICT to Dr. Patricia Hatfield Smith, both of Boston, in Old Greenwich, Conn., October 2.

ROBERT HUGH DION, Glendive, Mont., to Miss Mary Kathleen Cleckley of North Augusta, S. C., June 24.

OLIN A. DIVELY, Blandinsville, Ill., to Mrs. Mary Kathryn James of Macomb in October.

Deaths

Benjamin Warren Black ✠ Oakland, Calif.; Medico-Chirurgical College of Philadelphia, 1916; fellow of the American College of Hospital Administrators, of which he had been vice president, American College of Physicians and the American Psychiatric Association; member of the American Association for the Advancement of Science, Association of Military Surgeons of the United States, California Academy of Medicine and the American Hospital Association, of which he had been president and trustee; served as regimental surgeon with rank of major with 157th Infantry during World War I; lieutenant colonel, medical reserve corps, U. S. Army, not on active duty; held a commission in the reserve corps of the U. S. Public Health Service from 1920 to 1924; executive officer of the U. S. Veterans Bureau from 1924 to 1926 and medical director from 1926 to 1928; administrator of the Alameda County hospitals; died December 1, aged 58, of nephritis.

Raymond Edward Watkins ✠ Portland, Ore.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1909; professor and head of the department of obstetrics and gynecology at the University of Oregon Medical School; specialist certified by the American Board of Obstetrics and Gynecology, Inc.; member of the Pacific Coast Society of Obstetrics and Gynecology, of which he had served as president, Portland Academy of Medicine, the American Gynecological Society, International College of Surgeons and the Pacific Coast Surgical Association; past president of the Portland Society of Obstetrics and Gynecology; served during World War I; on the editorial board of the *Western Journal of Surgery, Obstetrics and Gynecology;* chief of the gynecologic and obstetric service at the Multnomah County Hospital; on the attending staff of the Emmanuel Hospital, where he died August 7, aged 63, of septicemia.

Hugh Carter Henry ✠ Richmond, Va.; Medical College of Virginia, Richmond, 1896; specialist certified by the American Board of Psychiatry and Neurology, Inc.; commissioner of the state department of mental hygiene and hospitals, a newly created position provided in the state government reorganization act, effective July 1, 1942; formerly assistant physician at the Central State Hospital in Petersburg, where he had been superintendent for many years; served as director of state hospitals since July 1, 1938, when the post was created; member of the Virginia Neuropsychiatric Society, of which he served as president, Southern Psychiatric Association, American Psychiatric Association and the Tri-State Medical Association; died October 14, aged 69, of carcinoma of the mediastinum.

Roger C. Swint ✠ Atlanta, Ga.; University of Georgia Medical Department, Augusta, 1898; an Affiliate Fellow of the American Medical Association; past president of the Baldwin County Medical Society and the Tenth District Medical Society; member of the American Psychiatric Association, serving as a member of the council; formerly assistant physician and clinical director of the Milledgeville (Ga.) State Hospital, where he had been superintendent from 1923 to 1935, when he resigned; as a token of the respect the hospital and community held for him, the principal road leading to the hospital grounds is known as Swint Avenue; consulting psychiatrist at the Veterans Administration Facility; died August 8, aged 69, of coronary occlusion.

Albert Dalbey Frost ✠ Columbus, Ohio; University of Pittsburgh School of Medicine, 1919; professor and since 1929 head of the department of ophthalmology at the Ohio State University College of Medicine; specialist certified by the American Board of Ophthalmology; member of the American Academy of Ophthalmology and Oto-Laryngology, American Ophthalmological Society and the Association for Research in Ophthalmology, Inc.; on the staffs of the University, Children's, Grant, Mount Carmel and White Cross hospitals; served as president of the Ohio Commission for the Blind; died near Monterey, Va., November 15, aged 56, of injuries received in an automobile accident.

Francis Fenwick Young ✠ Covington, La.; Medical Department of Tulane University of Louisiana, New Orleans, 1884; member of the Sixth District Medical Society, Southern Medical Society, Louisiana Hospital Association, American Hospital Association and the National Association of Private Psychiatric Hospitals; first vice president and member of the board of directors of the Commercial Bank and Trust Company of Covington; founder, director and psychiatrist in chief of the Fenwick Sanitarium, first located in Abbeville and from 1912 in Covington; died September 26, aged 82, of cardiovascular renal disease and undulant fever.

James T. M. Allan ✠ Los Angeles; University of Southern California College of Medicine, Los Angeles, 1903; on the staff of the California Hospital, where he died August 25, aged 75, of subacute bacterial endocarditis.

Nim Lou Barker, Broken Bow, Okla.; University of Arkansas School of Medicine, Little Rock, 1915; member of the American Medical Association; served during World War I; medical examiner for the Selective Service; died August 19, aged 60, of coronary occlusion.

Edward Hooker Baxter, Boston; University of Vermont College of Medicine, Burlington, 1882; member of the American Medical Association; died July 30, aged 93, of coronary sclerosis.

Nicholas William Bonelli, Baltimore; University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1928; member of the American Medical Association; served as police surgeon; died in the West Baltimore General Hospital August 14, aged 43, of meningococcemia.

William Celsor, Hartsville, Tenn.; Eclectic Medical Institute, Cincinnati, 1884; died August 25, aged 85.

Ira D. Clark, Fargo, N. D.; Chicago Homeopathic Medical College, 1895; served on the staff of the Grafton (N. D.) State School; formerly member of the school board; died July 23, aged 76, of coronary heart disease.

Jeremiah Joseph Donohue, Worcester, Mass.; College of Physicians and Surgeons, Baltimore, 1907; formerly city physician; served one term as a member of the school committee; died in Princeton August 4, aged 72, of chronic diffuse myocarditis.

Shepherd Drain, Baltimore; Maryland Medical College, Baltimore, 1906; Southern Homeopathic Medical College, Baltimore, 1907; member of the American Medical Association; died August 6, aged 68, of carcinoma of the bowel.

Mortimer Sharpe Faulkner, East Orange, N. J.; University of Oklahoma School of Medicine, Oklahoma City, 1942; served an internship, a residency and was a member of the staff of the Orange Memorial Hospital in Orange, where he died August 8, aged 31, of angioblastoma.

Lewis Michael Fox, Asheboro, N. C. (licensed in North Carolina in 1885); died in the Barnes-Griffin Clinic August 21, aged 86, of pneumonia.

Albrecht Eugene Fuld ✠ Port Washington, N. Y.; Friedrich-Wilhelms-Universität Medizinische Fakultät, Berlin, Prussia, Germany, 1932; specialist certified by the American Board of Radiology, Inc.; interned at the Auburn City Hospital in Auburn; served a residency at the Montefiore Hospital for Chronic Diseases in New York and the Methodist Hospital in Brooklyn; died July 3, aged 37.

John W. Groff ✠ Philadelphia; Jefferson Medical College of Philadelphia, 1888; past president of the Montgomery County Medical Society; died August 6, aged 81, of cerebral arteriosclerosis.

Nelson Kingsley Hopkins ✠ Arlington, S. D.; Northwestern University Medical School, Chicago, 1907; served as president of the South Dakota State Medical Association, of which he had been an honorary member; died July 25, aged 63.

Jackson Cleveland Loveless, Grayson, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1913; member of the American Medical Association; died in Atlanta August 4, aged 55.

Horatio Devol Luse, Cuernavaca, Morelos, Mexico; the Hahnemann Medical College and Hospital, Chicago, 1911; formerly affiliated with the U. S. Public Health Service Reserve and various Veterans Administration facilities; died July 22, aged 71.

Francis Henry McCaffrey, Providence, R. I.; St. Louis University School of Medicine, 1940; member of the American Medical Association; diplomate of the National Board of Medical Examiners; served a residency in anesthesia at the Lahey Clinic in Boston; on the staffs of the Homeopathic and Charles V. Chapin hospitals; on the staff of St. Joseph's Hospital, where he had interned and where he died July 21, aged 32.

Earnest Otis McCleary, Ordway, Colo.; State University of Iowa College of Homeopathic Medicine, Iowa City, 1909; served as county coroner, city health officer and county physician; died in the Mennonite Hospital and Sanitarium, La Junta, August 18, aged 60, of acute myocarditis.

James B. McWilliams, Ada, Ohio; University of Louisville (Ky.) Medical Department, 1884; died July 24, aged 84, of cerebral hemorrhage.

David McDill Morrison, Denver; College of Physicians and Surgeons, Chicago, 1884; died July 17, aged 91.

William Henry Musgrove ✠ Wheeling, Mo.; Marion-Sims College of Medicine, St. Louis, 1899; died in Eversonville August 22, aged 74, of cerebral thrombosis.

Ernst Valentine Neumann ✠ Los Angeles; John A. Creighton Medical College, Omaha, 1913; on the staffs of the Queen of Angels, Cedars of Lebanon and the Presbyterian Hospital-Olmsted Memorial, where he died August 14, aged 65, of pulmonary embolism.

Charles Henry Patterson, Fargo, N. D.; Minneapolis College of Physicians and Surgeons, the medical department of Hamline University, 1908; affiliated with the Veterans Administration Facility, where he died August 8, aged 60, of coronary arteriosclerosis.

Edward Herman Pond, Pittsburgh; University of Michigan Homeopathic School, Ann Arbor, 1886; died in the Shadyside Hospital July 7, aged 83, of nephrosclerosis and rheumatoid arthritis.

Luke William Price, Graham, Texas; Memphis (Tenn.) Hospital Medical College, 1894; past president of the Young-Jack-Archer Counties Medical Society; served as city and county health officer; worked with the Selective Service Board of Young County during World War II; on the staff of the Graham Hospital; died July 28, aged 71, of arteriosclerosis.

Mabel E. Rouse, Spring House, Pa.; College of Medicine and Surgery (Physio-Medical), Chicago, 1902; died August 31, aged 67, of coronary occlusion.

Hester Beck Searle, Denver; University of Colorado School of Medicine, Denver, 1930; member of the American Medical Association; interned at the George Washington University Hospital in Washington, D. C.; served on the teaching staffs of the Denver General and the Presbyterian hospitals in Denver; died in the Bellevue Hospital, New York, August 5, aged 38, of acute toxic hepatitis.

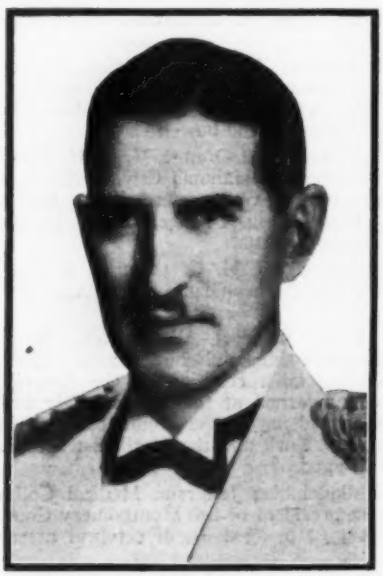
Robert Sidney Sloan, Columbus, Ohio; Ohio State University College of Medicine, Columbus, 1921; served as assistant physician at the Ohio Penitentiary; died in the Mount Carmel Hospital August 30, aged 49, of diabetes mellitus and nephrosclerosis.

Joseph Allen Smith ✠ Minot, N. D.; George Washington University School of Medicine, Washington, D. C., 1907; on the staff of the Trinity Hospital; died August 13, aged 61, of coronary thrombosis.

B. C. H. Spencer, Rochester, Mich.; Michigan College of Medicine, Detroit, 1881; formerly mayor of the village and member of the board of education; died August 25, aged 85, of cerebral thrombosis.

Joseph McArthur Spinks, Oak Hill, W. Va.; College of Physicians and Surgeons, Baltimore, 1912; died in the Massachusetts General Hospital, Boston, August 17, aged 58, of epidermoid carcinoma of the esophagus.

Millard F. Stever, Thompsonville, Mich. (licensed in Michigan in 1900); died August 7, aged 88, of heart disease.



LIEUT. COL. DWIGHT MEYER DETER
M. C., A. U. S., 1903-1944

CAPT. JOHN WISTER HAINES
M. C., A. U. S., 1912-1944

MAJOR JAY EUGENE TREMAINE
M. C., A. U. S., 1902-1944

Helen Jean Baird Schneider, Detroit; University of California Medical School, San Francisco, 1943; interned at the University of California Hospital in San Francisco; resident at the Henry Ford Hospital; died August 23, in Strathy, District of Nipissing, Ont., Canada, aged 28, from drowning.

Clarke Enoch Stewart, Vincennes, Ind.; Kentucky School of Medicine, Louisville, 1897; member of the American Medical Association; served during World War I; on the staff of the Good Samaritan Hospital, where he died August 8, aged 69, of injuries received in an automobile accident last Christmas eve.

KILLED IN ACTION

Dwight Meyer Deter, Austin, Texas; Baylor University College of Medicine, Dallas, 1929; served as resident physician at the North Louisiana Sanitarium in Shreveport; entered the medical reserve corps of the U. S. Army as a first lieutenant on July 16, 1929; began active duty as a captain on Dec. 1, 1939; promoted to major and lieutenant colonel; died in South China Sea Oct. 24, 1944, aged 41, while on board a Japanese prison ship which was sunk.

John Wister Haines, Philadelphia; State University of Iowa College of Medicine, Iowa City, 1937; interned and served a residency at the University Hospitals in Cleveland; served a residency at the City Hospital in Cleveland; entered the medical reserve corps of the U. S. Army as a first lieutenant on June 7, 1937; began active duty in the same grade on Nov. 23, 1940; promoted to captain; died in the South China Sea Oct. 24, 1944, aged 32, while on board a Japanese prison ship which was sunk.

Jay Eugene Tremaine, Palos Verdes Estates, Calif.; Rush Medical College, Chicago, 1930; interned and served as resident physician at St. Luke's Hospital in Chicago; began active duty as a first lieutenant in the medical reserve corps of the U. S. Army on April 3, 1941; later promoted to captain and major in the medical corps, Army of the United States; awarded the Bronze Star posthumously; died in Mindanao, P. I., Sept. 7, 1944, aged 41, while on board a Japanese prison ship which was sunk.

Ira Farwell Thompson ✠ Donnellson, Iowa; Keokuk Medical College, College of Physicians and Surgeons, 1902; member of the American Medical Association; died in Mount Pleasant August 1, aged 71, of thrombosis of the cerebral artery.

Albert R. Touvelle, Firth, Neb.; Medical College of Ohio, Cincinnati, 1882; died in Lincoln August 21, aged 88, of hypostatic pneumonia.

Friend Wilford Trader ✠ Columbiana, Ohio; University of Pittsburgh School of Medicine, 1923; president of the school board; on the staff of the Salem City Hospital, Salem; medical examiner for the Equitable Life Insurance Company; died August 30, aged 47, of coronary occlusion.

James Wilson Wallace ✠ Aledo, Ill.; Northwestern University Medical School, Chicago, 1906; died in the Moline (Ill.) Public Hospital August 26, aged 64, of a skull fracture received in a fall.

Joseph H. Wallis, Rice Lake, Wis.; Milwaukee Medical College, 1898; served as mayor of Rice Lake, Wis.; for many years connected with the Trinity Hospital in Milwaukee; at one time a captain in the medical corps of the state and the national guard; died in a hospital at St. Paul July 23, aged 71, of heart disease and bronchopneumonia.

John Thomas Ward, Providence, R. I.; Harvard Medical School, Boston, 1900; visiting physician at the St. Joseph's Hospital; died in the Lovell General Hospital, Fort Devens, Mass., July 21, aged 71, of coronary thrombosis.

James Watt ✠ New York; Long Island College Hospital, Brooklyn, 1900; fellow of the American College of Surgeons; medical director for the New York offices of the Union Carbide & Carbon Corporation and the General Foods Corporation; served in France during World War I; surgeon to the Midtown Hospital; courtesy surgeon, Flower and Fifth Avenue Hospitals; died in the Le Roy Sanitarium August 17, aged 69.

Elizabeth Fahnstock Lewis Whitaker, Anaheim, Calif.; New York Medical College and Hospital for Women, Homeopathic, New York, 1891; died in the Newhall Community Hospital, Newhall, July 30, aged 76.

William Preston White ✠ Henderson, Texas; Jefferson Medical College of Philadelphia, 1886; past president and secretary of the Rusk County Medical Society; president of the First National Bank and the Federal Savings and Loan Association; died July 3, aged 81, of heart disease.

Henry Charles Whiting, Fairfield, Iowa; Chicago Medical College, 1888; formerly a medical missionary in Korea; died August 18, aged 80, of mesenteric thrombosis.

Richard Edward Wilder, Whitefield, N. H.; Bellevue Hospital Medical College, New York, 1894; member of the American Medical Association; councilor and past president of the Coos County Medical Society; for many years medical referee for Coos County; member of the draft board during World War I; served several terms on the local school committee; on the staff of the Morrison Hospital, where he died August 24, aged 75.

Ernest Everett Wilson, Berkeley, Calif.; College of Physicians and Surgeons of San Francisco, 1906; served in France during World War I; died recently, aged 62.

Charles Luther Wood, Lakewood, Ohio; University of Wooster Medical Department, Cleveland, 1898; a member of the staff of the Lakewood Hospital, where he died July 19, aged 74.

John G. Wynns, Sturgis, Ky.; Hospital College of Medicine, Louisville, 1903; also a dentist; served as a member of the school board; died August 18, aged 68, of heart disease.

CAPT. DONALD L. WHITEHOUSE
M. C., A. U. S., 1915-1945

MAJOR ALBERT NOEL TOUSIGNANT
M. C., A. U. S., 1900-1944

CAPT. JOHN ROBERT PEPIN
M. C., A. U. S., 1916-1944

KILLED IN ACTION

Donald Lynwood Whitehouse, Wakefield, Mass.; Tufts College Medical School, Boston, 1941; diplomate of the National Board of Medical Examiners; interned at the Lawrence General Hospital in Lawrence, Mass.; began active duty as a first lieutenant in the medical corps, Army of the United States, on July 1, 1942; promoted to captain; awarded a presidential citation and the Purple Heart; killed in action on Luzon, P. I., February 13, aged 29.

Albert Noel Tousignant, Oconto, Wis.; Marquette University School of Medicine, Milwaukee, 1925; member of the American Medical Association; interned at the Marquette University Hospital in Milwaukee; for four years held the position of medical director of the Civil Conservation Corps camps in Wisconsin and upper Michigan; entered the medical reserve corps of the U. S. Army as a first lieutenant on Jan. 28, 1925; began active duty as a captain on March 17, 1941; stationed in the Philippines as chief surgeon of the Sternberg Hospital, Manila; after the fall of Bataan and Corregidor, was listed as missing; promoted to major in the medical corps, Army of the United States; died in the South China Sea Oct. 24, 1944, aged 43, while on board a Japanese prison ship which was sunk.

John Robert Pepin, Escanaba, Mich.; University of Michigan School of Medicine, Ann Arbor, 1941; interned at the Columbia Hospital in Milwaukee; began active duty as a first lieutenant in the medical corps, Army of the United States, on Oct. 12, 1942; promoted to captain on July 20, 1943; killed in action in the European area Aug. 9, 1944, aged 27.

Correspondence

"WHY TRADENAMES FOR ANTIBIOTICS?"

To the Editor:—I wish to compliment you on the editorial comment "Why Tradenames for Antibiotics?" (THE JOURNAL, October 20). This could readily apply to many other phases of the pharmaceutic practices. We are obliged to phone the druggist taking the proper name of many preparations before prescribing. The rank and file of physicians, as I discover, are disgusted with this practice, and I believe we would gladly specify any firm that might put out its products under the name that would indicate the real composition and use. I doubt if we really fall for the trick of trade names by different houses. I for one would select a firm in which I have confidence and prescribe accordingly.

CHARLES A. COFFIN, M.D., Kewanee, Ill.

To the Editor:—May I take the liberty to say that your short editorial comment is but too justified. The trade names for the various barbituric acids and the vitamins are already a heavy burden to the memory of the physicians. Yesterday it cost me quite a time to find out which firm manufactures cevitamic acid and whether the name was cevitamic or cevitaminic acid. There is no grammatical reason for one or the other way to write it. As I did not want to ask a drug store, I was compelled to look over quite a number of periodicals; finally I found out that it is manufactured by Abbott and is spelled cevitamic acid (for ascorbic acid). It would be much simpler and easier in case physicians could prescribe Ascorbic Acid, Squibb, or Ascorbic Acid, Abbott, or whatever other product they would prefer. In the same way it would be much easier to prescribe Barbituric Acid, Roche (called Allonal), or Barbituric Acid, Abbott (instead of Nembutal), and so forth.

ROBERT KUHN, M.D., Athens, Ga.
Resident Physician, St. Mary's Hospital.

CREEPING ERUPTION

To the Editor:—We wish to add the feature of remote skin response to the allergic picture of cutaneous helminthiasis (larva migrans, or creeping eruption) recently delineated in THE JOURNAL (Wright, D. O., and Gold, E. M.: Loeffler's Syndrome Associated with Creeping Eruption [Cutaneous Helminthiasis], THE JOURNAL, August 11, p. 1082).

On September 20 one of us (H. A. A.) noted a triple infestation of the sole of his right foot manifested by typical serpentine burrows of larva migrans. At the same time he became aware of pruritic skin lesions which successively but meagerly invaded various parts of his torso before appearing profusely on the inner aspect of each thigh about twenty-four hours later. The eruption consisted of discrete, dull erythematous plaques measuring about a centimeter in diameter. The itch was mild. As each lesion receded, its surface became somewhat crinkled. An occasional plaque then seemed to contain a superficial pinhead of clear fluid, which absorbed readily. None ruptured. All remote skin manifestations disappeared gradually during the next two and a half weeks and were gone a day or two before it was decided that the last of the culprit dog hookworm larvae had ceased its peregrinations and had apparently given up the ghost.

Laboratory studies were not feasible, owing to the stand-by status of this station.

We consider this rash to have been an allergic cutaneous manifestation of Ancylostoma braziliense infection.

HENRY A. ARKLESS, Captain, M. C., A. U. S.
JOSEPH H. HOLMES, Captain, M. C., A. U. S.

LUDWIG ASCHOFF

To the Editor:—A nephew of mine who is a lieutenant in the United States Army saw in a book shop in Italy a book by Aschoff published in 1940 in Nazi Germany. The title of the book is "Rudolf Virchow: Wissenschaft und Weltgeltung," published by Hoffmann und Campe, Hamburg. In the beginning chapters of this book Aschoff writes in a way that enabled the book to pass the censorship. He states that he will deal only with the scientist Virchow, not with the politician, with whose views he disagrees. In later chapters, however, which generally are not read by a censor, Aschoff deals freely with Virchow's liberalism. I have known Aschoff personally and I have heard him talk in political meetings and have always considered him liberal. When I last visited him (around 1930) I was impressed by his liberal views and by his interest in American ideas and institutions.

The book "Rudolf Virchow: Wissenschaft und Weltgeltung" (Hamburg, Hoffmann und Campe, 1940, 95 pages) by Ludwig Aschoff is a curiosity in the history of medicine and of bibliography. Brought out in 1940, during World War II, by the publishing house that once printed Heinrich Heine's poems, it forms part of a series called "Spiritual Europe" (naturally under Nazi censorship). The keynote of the series is Franco-German understanding in science, philosophy, music and art. The aim and the failure of the undertaking do not concern us. Pathologists, however, are interested in a book on Virchow, the master pathologist and great liberal, written by Aschoff, a great pathologist about whose political attitude opinions have differed, during his lifetime as well as afterward.

The reader will be surprised by an array of quotations from Virchow's variegated writings. These, put together, form a neat little anti-Nazi catechism, which becomes even more concise and impressive by the use of italics:

"My patriotism . . . is not this dead love that arrogantly looks down on other people. . . ."

"By recognizing and honoring each other we shall become accustomed to fight with logic, not with weapons. . . ."

"Reconciliation . . . instead of hatred. . . ."

"The idea of a true and really all embracing humanity. . . ."

"Liberty to the largest extent. . . ."

"Science is human by nature, its form only is national" (reviewer's translation).

Aschoff does not even shrink from the taboo of race in writing about Virchow's anthropologic work, including the Jewish question; in this he cleverly camouflages himself by reporting a harmless controversy between Virchow and a Jewish writer. Through much of the book Aschoff lets Virchow have the floor and leaves the reader to form his own opinion and to guess that of the writer, as for instance in the ticklish question of naturopathy, which was looked on with favor by the Nazi government. On occasion Aschoff must have chuckled while thinking of the censor: he gives a list of famous Germans who have written letters to Virchow, and the one letter he prints verbatim came from the author of Germany's most popular farmer stories. Aschoff knew that this man had been a Jew and he could safely assume that the censor did not.

The book is intended for lay people as well. Readers who are not familiar with the intricacies of medical and philosophic thinking between 1800 and 1850 may be misled by quotations and statements about Virchow's vitalistic ideas. These, however, are stimulating to the medical scientist when he considers the similarity between 1850 and today, namely the accumulation of many facts and the longing for synthesis. Virchow fulfilled this longing.

The book has a place in the history of pathology for Aschoff's sake as well as for Virchow's.

ALFRED PLAUT, M.D., New York.

TREATMENT OF AGRANULOCYTOSIS

To the Editor:—The report on the need of penicillin in thiouracil induced agranulocytosis by Drs. H. H. Rothendler and M. G. Vorhaus in the November 10 issue of THE JOURNAL raises the question of the proper treatment of agranulocytosis.

A review of the literature shows the occurrence of agranulocytosis in 31 of 1,985 persons, who received thiouracil; 10 patients died. Agranulocytosis may occur at any period in the course of thiouracil treatment even when small maintenance doses are employed. Unfortunately it may occur suddenly and even one week after the withdrawal of the drug therapy as it does following the use of sulfonamides and oxophenarsine hydrochloride (mapharsen). Several of the cases listed, such as the one of Rothendler and Vorhaus, have signs and symptoms of angina with elevated temperature, yet the blood picture shows only a severe granulocytopenia. I have had agranulocytosis occur in 2 of 35 patients who were treated with thiouracil. Both recovered.

In the treatment of agranulocytosis the drug should be immediately stopped; if the patient is warned he can do so himself. Penicillin should be given prophylactically as well as therapeutically for infection in adequate dosage. Maintenance of nutrition is urged. It is important to avoid too much handling of the patient and to segregate him from people with colds or other infections. Therapeutic endeavors, particularly sternal punctures, are contraindicated. In 1 case in the literature a sternal abscess was found post mortem. Iodine should be given to the patient who has had thyrotoxicosis in order to sustain the improvement of the thyroid state and prevent the possibility of a thyroid crisis. I gave my patients, empirically, crude liver extract. I do not expect too much from pentnucleotide, bone marrow concentrate, pyridoxine or folic acid as a cure for agranulocytosis. Transfusions are useful only in supplying nutriment to the body. The white blood cells are not increased following transfusions alone. They are too dangerous to use, since transfusion reactions have contributed to the death of several patients. Agranulocytosis may persist for seven to eight days. After this period one is usually rewarded by the slow recovery of the patient if an infection is not penicillin resistant.

BERNARD SELIGMAN, M.D., Brooklyn.

HEAT DISEASE

To the Editor:—The article "Statistical Study of 265 Cases of Heat Disease" by Borden, Wadill and Grier (THE JOURNAL, August 25, p. 1200) was read with considerable interest. To those of us stationed in the southern part of Iran, where some of the highest known environmental temperatures have been recorded, the problem of heat disease has been of considerable importance. During this last summer we have encountered dry bulb shade temperatures up to 122 F. and humidity as high as 61 per cent.

The general principles of treatment as outlined in the article are sound. In the management of heat stroke, however, there is, in my opinion, a considerable misdirection of emphasis. Much attention is devoted to the "rapid restoration of circulating fluid volume"; the urgency of rapidly reducing the hyperthermia is inadequately stressed.

True heat stroke results from a breakdown of the central temperature regulating mechanism. In this condition I have encountered rectal temperatures of over 110 F. It is well known that irreparable brain damage can result from severe hyperthermia if it is permitted to persist for any length of time. I have seen 2 patients with heat stroke who were left with serious residual neuropsychiatric sequelae: 1 manifested definite mental impairment and the second was left with a hemiplegia and motor aphasia. The primary consideration is rapid lowering of the body temperature to a safe level of about 102 F. The use of a water spray with electric fans, as described by the authors, is adequate for this purpose. After the temperature is lowered, these patients must be carefully watched, since the hyperthermia may recur.

The process of brain damage in severe heat stroke is rapid and every minute counts. Consequently I cannot agree when the authors state that "intermediary treatment in the hospital or field is discouraged." Medical aid men readily learn the danger of severe hyperthermia and the necessity of immediate treatment. Treatment directed toward lowering the body temperature can and should be started whenever the patient is found. It is often dangerous to transport these patients for some distance to a hospital during the heat of the day. Every dispensary in this area is equipped with a heat stroke room so that immediate treatment can be instituted.

In our cases of heat stroke, circulatory collapse has not been a significant factor. The pulse is full and bounding and the blood pressure maintained. The use of plasma would appear to serve no purpose. It is true that these patients have lost considerable body salt, and a slow intravenous drip of isotonic solution of sodium chloride appears to be of some value. The dangers of pulmonary edema must be considered.

While heat exhaustion and heat stroke often merge, it is extremely important to distinguish clearly the cases of severe hyperthermia. These are the patients in whom death or serious sequelae can be avoided by immediate treatment.

HERMAN R. NAYER, Captain, M. C., A. U. S.

USE OF SALICYLATES IN RHEUMATIC FEVER—MIXTURE OF ASPIRIN AND VITAMIN K UNWARRANTED

To the Editor:—Since Link and his associates demonstrated a hypoprothrombinemic effect of salicylates in rats using 12.5 per cent plasma, the clinical significance in man of this finding has been in question. Despite the fact that unequivocal reports of actual hemorrhagic complications developing during salicylate therapy are rare, THE JOURNAL saw fit to call attention to the potential dangers in an editorial (Hazards in the Salicylate Treatment of Rheumatic Fever, Feb. 24, 1945, p. 460).

A great opportunity to throw light on this question has arisen with the large number of rheumatic fever cases seen in the armed forces which have been treated with large doses of salicylates, reports of which are now appearing. With doses as large as 10 to 15 Gm. daily continued over long periods, salicylate levels as high as 30 to 60 mg. per hundred cubic centimeters have commonly been attained with some increase in prothrombin time but with no evidence of hemorrhage. Lieutenant Butt and his associates (THE JOURNAL, August 25, p. 1195) have recently reported their experience with treatment of 51 cases of rheumatic fever with salicylates in the Navy. They found slight elevation of prothrombin time but no evidence of hemorrhage.

Based on our experience at this hospital, Lieutenant Colonel Warren reported a series of 98 cases of rheumatic fever (Central Society for Clinical Research, Chicago, November 2) treated with 10 to 20 Gm. of salicylates daily with no evidence of hemorrhage. Major Coombs reported (American Federation for Clinical Research, Chicago, November 1) that rheumatic fever patients receiving 10 or more grams of salicylate show an increase in prothrombin time only up to 20 seconds (normal 14 seconds). This is not a dangerous disturbance, according to Quick. Coombs further pointed out that doses of 6 Gm. or less per day cause no disturbance of the prothrombin time.

Two recently printed items make this more than an academic problem and stimulated this communication. One was the pub-

lishing in THE JOURNAL, October 20, of an abstract of an uncritical article on the subject by Capt. Rudolf Singer (*Arch. Otolaryng.* **42**:19 [July] 1945) which might be accepted for more than it is worth by readers not acquainted with the subject. Singer stated in essence that since post-tonsillectomy hemorrhages are more common in this country than in Europe, and aspirin is given more commonly postoperatively in this country than in Europe, the explanation must be the administration of salicylates. The flaws of such reasoning should be obvious to all.

The second was an announcement in the Madison *Wisconsin State Journal* of October 8 that a patent had been assigned to the Wisconsin Alumni Research Foundation for a combination of aspirin and synthetic vitamin K, which presumably would be put on the market for public exploitation on the basis that such a combination would be superior to plain aspirin.

It is my belief that the present evidence shows that while salicylates do cause a slight prolongation of the prothrombin time, this is not clinically significant in doses up to 150 grains (10 Gm.) daily and hence the routine addition of vitamin K to aspirin is unwarranted.

CHARLES S. HIGLEY, Lieutenant Colonel, M. C., A. U. S.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Libel: Letter by Attending Physician to Successor Regarding Treatment Given Patient Not Libelous.—The plaintiff operated a "beauty parlor" in Fort Worth, Tarrant County, Texas. Being required by a Texas statute to obtain a "health certificate" to continue in business, she submitted to an examination by the physician defendant in Fort Worth. He advised her that she was "diseased" and administered "three shots of bismuth and three shots of Neo" within the next three weeks. These injections "caused first an itching sensation and later pain and suffering." After the sixth injection her suffering became so intense that she refused further treatment and closed her business in Fort Worth. She then returned to her former home in Greenville, Hunt County, Texas. Her suffering increased in intensity. Her hands and feet became swollen, her skin peeled off and she was confined to her room for several months, all the result, so she claimed, of "an overdose of arsenic administered by the physician." Before leaving Forth Worth the patient had informed the physician of her plans and he advised her that the injections must be continued. In response to her inquiry as to what the injections were, he told her that he would write her physician in Greenville concerning his treatment and, acting apparently in response to his patient's request, he wrote the following letter to his patient:

> September 25, 1942. . . . My dear Miss————: We are giving you the following information so that you may pass it on to your doctor. We have given you, since September 1, three shots of bismuth and three shots of Neo. Very truly yours, ————M.D.

The patient kept this letter in her possession until Oct. 26, 1942, when she handed it to her physician in Greenville. Apparently, though this fact is not made clear from the reported case, to justify at all the litigation that ensued, there must have been some variance in the diagnoses of the two physicians.

Subsequently the patient sued the physician defendant in Hunt County, alleging, as grounds for recovery of damages, (1) that the letter quoted was a libel in that its effect was to charge that she was suffering from and had been treated for a contagious or infectious disease and (2) that the physician had been grossly negligent in his diagnosis and treatment. The physician defended by pleading privilege, in effect, that the suit against him should have been instituted in Tarrant County, in which Fort Worth was located. The patient filed a controverting affidavit, alleging (1) that the libelous letter was published in Hunt County, where she resided at the time of the accrual of the cause of action and (2) that in treating her the defendant committed a continuing trespass, having its inception in Tarrant County and its completion in Hunt County, in which she suffered her major injuries. The trial court overruled the physician's plea of privilege and he appealed to the court of civil appeals of Texas, which certified certain questions of law to the Supreme Court of Texas for determination.

Two of the certified questions of law were as follows:

> Second. Was delivery by appellee [patient] to Dr. Kennedy [the Greenville physician] of the letter given her by the appellant for the purpose and under the circumstances mentioned, appellee knowing at the time its meaning and purpose, a publication by her of the alleged defamatory matter?
>
> Third. Under the facts heretofore stated, did appellee's alleged cause of action for libel against the appellant, if a cause of action existed, accrue in Hunt County?

The effect of the filing by the physician of the plea of privilege, said the Supreme Court, and the controverting affidavit filed by the patient was to impose on the patient the burden of proving that a cause of action for libel in fact accrued in her favor. There is no libel unless there is a publication, for the gist of an action for libel is injury to the plaintiff's reputation. Under the facts, the controlling question, so far as the right of the patient to sue in Hunt County is concerned, is: Was there a publication by the patient of a libel? That the patient requested the physician to write a letter to be shown her Greenville physician and that she herself, after placing herself under the treatment of her physician in Greenville, showed him the letter is clear. Her claim for damages for libel is on the theory that the letter was defamatory, meaning by necessary implication and understood by any physician to mean that she was unchaste and had a loathsome disease and that the physician defendant had been treating her. The letter was written in response to her request so that her Greenville physician would know what treatment had been given. The patient, however, was free to make use of the letter or not to use it as she saw fit. There is no suggestion that the physician defendant misled her as to the meaning of the contents of the letter. We express no opinion as to questions other than that of publication and, in our opinion, if the publication of which the plaintiff complains was consented to, authorized, invited or procured by the plaintiff, she cannot recover for injuries sustained by reason of the publication. Therefore the answer to these two certified questions of law is as follows: The delivery of the letter by the patient to her Greenville physician for the purposes and under the circumstances shown in this case was the publication of the libelous matter, if any, by the patient, and not by the physician, and a cause of action for libel did not accrue in favor of the patient.

The final question of law certified to the Supreme Court was as follows:

> Was the trespass complained of, that is, the alleged negligent diagnosis and treatment of appellee by the appellant causing her suffering and damages in both Tarrant and Hunt counties, a continuing trespass authorizing suit in either county within the meaning of subdivision 9, Article 1995? [Revised Civil Statutes, Texas, 1925.]

The section referred to in that question reads as follows:

> A suit based upon a crime, offense or trespass may be brought in the county where such crime, offense or trespass was committed, or in the county where the defendant has his domicile.

The patient, said the Supreme Court, relying for venue in Hunt County on the provision of the statute just quoted, had the burden of pleading and proving that a trespass was in fact committed in Hunt County. As shown by the facts, however, all the treatments, the injection of drugs which were alleged to have caused injury to the patient, were administered by the physician in Tarrant County. The injuries from the treatments were first suffered in Tarrant County and after the patient had left that county and returned to Hunt County her suffering from the treatments in Tarrant County continued and increased in intensity. The patient contended that the physician, by the injection of drugs in her veins in Tarrant County, set in motion an agency which he knew would inflict physical injury many days in the future, that the agency thus set in motion inflicted serious injury on her in Hunt County, and that thus the physician by the agency adopted did commit a tresspass in Hunt

County. In our opinion, answered the court, this claim confuses injury caused by the trespass with the trespass itself. The misfeasance or the wrongful act is the trespass. Trespass is defined in 2 Bouvier's Law Dictionary, Rawle's Third Revision, page 3316, as:

> An unlawful act committed with violence, actual or implied, causing injury to the person, property, or relative rights of another.

Frequently the word "injury" is used in its secondary meaning as having reference to an act which damages, harms or hurts, but ordinarily and primarily the word means the damage or hurt done to or suffered by a person or thing. 21 Words and Phrases, Permanent Edition, pages 414-443. While it is true that an action for compensatory damages may not be maintained unless the trespass has caused injury, the trespass is the misfeasance or wrongful act, and the injury is the result of the trespass rather than a part of it. The statute under consideration uses the words "in the county where such crime, offense or *trespass* was committed." The physician's acts of which the patient complains were committed in Tarrant County. The resulting injuries were in part suffered in Hunt County. Previous decisions of this court support the conclusion that the wrongdoer's act is the gist of the trespass and hold that the word trespass as used in the statute under consideration here embraces only wrongful acts, wilfully or negligently committed, and not to mere omissions to do what should have been done. Furthermore, decisions of the court of criminal appeals of Texas as to the venue for prosecution of the crime of abortion are in point. The general venue statute which is applicable to that offense provides that the proper county for the prosecution of the offense is that "in which the offense was committed." Article 211, Code of Criminal Procedure. It has been held that if the means or medicine which procures the abortion is used or administered in one county and the abortion occurs in another county, venue lies in the first county. These decisions hold that, although the final consummation of the offense occurred in the second county, the sole cause of it was set in motion in the first county and that because the defendant put in operation a force in one county, which produced its results in another county, the accused is responsible in the forum in which he performed the acts which resulted in the abortion. *Moore* v. *State*, 37 Texas Cr. R. 552, 40 S. W. 287; *Humphries* v. *State*, 93 Texas Cr. 399, 248 S. W. 374.

As determinative of the last question of law certified the court referred to *Wiese* v. *Becker*, Texas Civ. App., 294 S. W. 991. There a physician was sued for injuries suffered by his patient as the result of the negligent setting and bandaging of a broken arm. The patient in that case by a controverting affidavit alleged that the physician negligently set and bandaged the arm in Washington County and directed his patient to return to her home in Austin County, where she suffered intense pain and where, by reason of the unskilful setting and bandaging of the arm, the bones became incorrectly set, some of the ligaments were severed by the bandage and the arm was turned and twisted, resulting in loss of use. There the court held that the suit could not be brought in Austin County because there were no allegations of an affirmative act constituting a trespass committed by the physician in that county, the allegations showing on the contrary that everything the defendant did took place, not in Austin County in which the suit was brought, but in Washington County. In answer to the contention that there was a continuing trespass the court said:

> In order to constitute a "continuing trespass," begun in one county and concluded in another, there must be some affirmative act constituting a trespass committed in each county. The negligent or unskilful setting and bandaging of appellant's broken arm in Washington County, from which her injury subsequently resulted in Austin County, did not constitute a "trespass" in the latter county, as that term is used in our venue statute.

Accordingly, the court answered the last question certified to the effect that the trespass complained of by the patient was not a continuing trespass authorizing suit in either Tarrant or Hunt County but was a trespass committed in Tarrant County, in which jurisdiction the suit should have been brought.

The net effect of the answers given by the Supreme Court to the certified questions was to result in the dismissal of the patient's suit against the physician.—*Lyle* v. *Waddle*, *188 S. W. (2d) 770 (Texas, 1945).*

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examination of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL, Dec. 8, page 1045.

BOARDS OF MEDICAL EXAMINERS

ALABAMA: Mar. 19-21. Sec. Dr. B. F. Austin, 519 Dexter Ave., Montgomery 4.

ARIZONA: * Phoenix, Jan. 4-5. Sec., Dr. J. H. Patterson, 826 Security Bldg., Phoenix.

CALIFORNIA: *Written.* Los Angeles, March 11-14. Sec., Dr. Frederick N. Scatena, 1020 N St. Sacramento 14.

COLORADO: * Denver, Jan. 1-5. Final date for filing application is Dec. 17. Sec., Dr. J. B. Davis, 831 Republic Bldg., Denver.

DELAWARE: *Endorsement.* Dover, Dec. 19. Sec., Medical Council of Delaware, Dr. J. S. McDaniel, 229 S. State St., Dover.

IDAHO: Boise, Jan. 15. Dir., Bureau of Occupational Licenses, Miss Agnes Barnhart, 355 State Capitol Bldg., Boise.

ILLINOIS: Chicago, Jan. 8-10. Supt. of Registration, Department of Registration & Education, Mr. Philip Harman, Springfield.

INDIANA: Indianapolis, April 25-27. Sec., Board of Medical Registration & Examination, Dr. W. C. Moore, 301 State House, Indianapolis 4.

KENTUCKY: Louisville, March 25-27. Sec., State Board of Health, Dr. Philip E. Blackerby, 620 S. Third St., Louisville 2.

MAINE: Jan. 23-25. Sec., Board of Registration of Medicine, Dr. A. P. Leighton, 192 State St., Portland.

MICHIGAN: * Detroit, March 26-28. Sec., Board of Registration in Medicine. Dr J. E. McIntyre, 100 W. Allegan St., Lansing 8.

MONTANA: Helena, April 1-3. Sec., Dr. O. G. Klein, First National Bank Bldg., Helena.

NEVADA: Carson City, Feb. 4. Sec., Dr. G. H. Ross, 215 N. Carson St., Carson City.

NEW JERSEY: Trenton, June 18-19. Sec., Dr. E. S. Hallinger, 28 W. State St., Trenton.

NEW MEXICO: * Santa Fe, April 8-9. Sec., Dr. LeGrand Ward, 141 Palace Ave., Santa Fe.

NEW YORK: Jan. 28-31. Sec., Dr. Jacob L. Lochner, Education Bldg., Albany.

NORTH CAROLINA: *Reciprocity.* Raleigh, Dec. 29. Final date for filing application is Dec. 19. Sec., Dr. Ivan Proctor, Raleigh.

NORTH DAKOTA: Grand Forks, Jan. 1. Sec., Dr. G. M. Williamson, 4½ S. Third St., Grand Forks.

OHIO: *Endorsement.* Columbus, Jan. 8. *Examination.* Columbus, March 19-22. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

OKLAHOMA: * Oklahoma City, March 23. Sec., Dr. J. D. Osborn Jr., Frederick.

OREGON: * Jan. 23-26. Exec. Sec., Miss L. M. Conlee, 608 Failing Bldg., Portland 4.

PENNSYLVANIA: Harrisburg, January. Act. Sec., Bureau of Professional Licensing, Department of Public Instruction, Mrs. M. G. Steiner, 351 Education Bldg., Harrisburg.

RHODE ISLAND: * Providence, Jan. 3-4. Chief, Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH DAKOTA: * Pierre, Jan. 15-16. Sec., Medical Licensure, State Board of Health, Dr. Gilbert Cottam, Capitol Bldg., Pierre.

TENNESSEE: * Memphis, Dec. 19-21. Sec., Dr. H. W. Qualls, 130 Madison Ave., Memphis 3.

TEXAS: Austin, March 27-29. Sec., Dr. T. J. Crowe, 918-20 Texas Bank Bldg., Dallas 2.

VERMONT: Burlington, March or April 1946. Sec., Dr. F. J. Lawliss, Richford.

WASHINGTON: * Seattle, Jan. 14-16. Dir., Department of Licenses, Mr. Harry C. Huse, Olympia.

WEST VIRGINIA: Charleston, Jan. 7-9. Commissioner, Public Health Council, Dr John E. Offner, State Capitol, Charleston 5.

WISCONSIN: * Madison, Jan. 8-10. Sec., Dr. C. A. Dawson, Tremont Bldg., River Falls.

WYOMING: Cheyenne, Feb. 4. Sec., Dr. G. M. Anderson, Capitol Bldg., Cheyenne.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

IOWA: Des Moines, Jan. 8. Dir., Division of Licensure & Registration, Mr. H. W. Grefe, Capitol Bldg., Des Moines.

MICHIGAN: Ann Arbor and Detroit, Jan. 11-12. Sec., Miss Eloise LeBeau, 101 N. Walnut St., Lansing.

MINNESOTA: Minneapolis, Jan. 2-3. Sec., Dr. J. C. McKinley, 126 Millard Hall, University of Minnesota, Minneapolis 14.

NEBRASKA: Omaha, Jan. 8-9. Dir., Bureau of Examining Boards, Mr. Oscar F. Humble, 1009 State Capitol Bldg., Lincoln 9.

OKLAHOMA: Oklahoma City, Jan. 21. Sec., Dr. J. D. Osborn Jr., Frederick.

OREGON: Portland, March 2. Sec., Board of Higher Education, Mr. C. D. Byrne, University of Oregon, Eugene.

SOUTH DAKOTA: December. Sec., Dr. J. D. Alway, Aberdeen.

TENNESSEE: Memphis and Nashville, Dec. 17-18. Sec., Dr. O. W. Hyman, 874 Union Ave., Memphis.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1935 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Heart Journal, St. Louis

30:215-320 (Sept.) 1945

*Effect of Theophylline with Ethylenediamine (Aminophylline) and of Papaverine Hydrochloride on Experimental Myocardial Infarction in Dog. R. Mokotoff and L. N. Katz.—p. 215.

*Primary Tumor of Left Auricle Simulating Mitral Stenosis. Miriam Hirschfeldt Field, M. A. Donovan and H. Simon.—p. 230.

Paroxysmal Complete Heart Block, Produced by Ischemia of Auriculoventricular Node. A. Ross.—p. 238.

Treatment of Auricular Fibrillation Occurring with Myocardial Infarction. J. M. Askey and O. Neurath.—p. 253.

Value of Lead IVF in Cardiac Infarction. C. R. Burton.—p. 259.

Observations on 2 Patients with Paroxysmal Ventricular Tachycardia Treated by Intravenous Administration of Quinidine Lactate. D. W. Chapman.—p. 276.

Premature Beats of Sinus Origin: Electrocardiographic Demonstration of Clinical Case. A. J. Geiger and J. R. Goerner.—p. 284.

Incomplete Heart Block Produced by Changes in Posture. J. H. Holmes and D. R. Weill Jr.—p. 291.

Aminophylline and Papaverine Hydrochloride in Myocardial Infarction of Dog.—Mokotoff and Katz studied the size of the myocardial infarcts eight weeks after ligation of the left anterior descending coronary artery in untreated dogs and dogs treated during this period with either aminophylline or papaverine. They found that papaverine and aminophylline, when given for a period of eight weeks in amounts comparable to therapeutic and nontoxic doses in man, reduce the size of experimental myocardial infarcts in dogs. Papaverine is more effective than aminophylline in this respect. There is an anatomic increase in the size and number of anastomotic channels in infarcted hearts with occlusion of a main coronary artery as compared with normal hearts. This was demonstrated by injection technic. No difference in the stage of healing was seen microscopically between the treated and the untreated dogs at the end of eight weeks. The difference in infarct size between the treated and the untreated dogs was not associated with any anatomic difference in the postmortem demonstration of the extent of the anastomoses. The difference in infarct size was due to a larger caliber of these anastomotic channels during life in the drug-treated dogs because of coronary vasodilatation and probably also of a more rapid early development. In these two ways the marginal area of the ischemic region was rendered sufficiently less ischemic and did not become necrotic. The rationale of early vasodilator therapy in recent myocardial infarction has been demonstrated, and both aminophylline and papaverine, especially the latter, have been shown to be effective.

Tumor of Left Auricle Simulating Mitral Stenosis.—A woman aged 48 with a primary tumor of the heart was diagnosed as having mitral stenosis. The presenting signs and the electrocardiographic and x-ray studies confirmed this diagnosis. The atypical course during the last few days of life was explained on the basis of unusual complications. It is this atypical course that recently has been reemphasized as being most helpful in the diagnosis of heart tumor. When the heart was examined during necropsy, a soft but resilient tumor was found filling the entire left auricle. Field and her associates identify the tumor as a pedunculated myxoma attached to the interauricular septum. They say that all primary neoplasms of the heart are of mesoblastic origin, with fibroma, myxoma, sarcoma and rhabdomyoma predominating. Myxoma is the most common and the most debated type of cardiac tumor. Thorel believed that myxomas are merely degenerative forms of organized thrombi. Ewing states that separation of myxomas from organized thrombi may be based on the highly mucinous character of the stroma and on the presence of orderly radiating blood vessels and elastic fibers. In the reported case the size of the tumor, the site of attachment, the absence of layer formation (as would be expected in a thrombus), the healthy state of the endocardium and the histologic structure all seem to indicate that the tumor represents a true neoplasm. The pathologic aspects suggest that the use of digitalis in this condition may have caused early death of the patient.

American J. Digestive Diseases, Fort Wayne, Ind.

12:281-322 (Sept.) 1945

High Dosage Vitamin C in Allergy. S. L. Ruskin.—p. 281.

Globin Insulin: Clinical Study. A. Trasoff, C. Borden, S. S. Mintz. —p. 313.

Pyogenic Infections of Perineum and Buttock Skin. C. J. Drueck. —p. 316.

American Journal of Physiology, Baltimore

144:331-476 (Aug.) 1945

Development of Hypertension in Emotional Gray Norway Rats After Air Blasting E. J. Farris, Eleaner H. Yeakel and H. S. Medoff. —p. 331.

Oxidation of Pyruvate and Glucose in Brain Suspensions from Animals Subjected to Irreversible Hemorrhagic Shock, Carbon Monoxide Poisoning or Temporary Arrest of Circulation: Study of Effects of Anoxia. O. Rosenthal, H. Shenkin and D. L. Drabkin. —p. 334.

Crystalline Vitamin B_6 in Relation to Cellular Elements of Chick Blood. C. J. Campbell, Margaret M. McCabe, R. A. Brown and A. D. Emmett.—p. 348.

Osmotic Activity of Gastrointestinal Fluids After Water Ingestion in Rat. Robert Follansbee.—p. 355.

Effect of Estrone and Diethylstilbestrol on Growth Rate of Rats and on Iodine Content of Thyroids. V. L. Koenig, F. X. Gassner and R. G. Gustavson.—p. 363.

Nitrogen Balance and Plasma Protein Regeneration in Hypoproteinemic Dogs. R. D. Seeley.—p. 369.

Visual Thresholds as Index of Modification of Effects of Anoxia by Glucose. R. A. McFarland, M. H. Halperin and J. I. Niven. —p. 378.

Further Afferent Connections to Acoustic Cortex of Dog. A. R. Tunturi.—p. 389.

Changes in Renal Clearance Following Complete Ischemia of Kidney. E. E. Selkurt.—p. 395.

Electrocardiogram in Chronic Thiamine Deficiency in Rats. J. M. Hundley, L. L. Ashburn and W. H. Sebrell.—p. 404.

Effect of Destroying Three Localized Cerebral Cortical Areas for Sound on Correct Conditioned Differential Responses of Dog's Foreleg. W. F. Allen.—p. 415.

Local Fluid Loss in Trauma. J. L. Nickerson, with technical assistance of P. M. Porter and A. G. Buckman.—p. 429.

Phosphate Turnover in Muscle During Shock. J. L. Bollman and Eunice V. Flock.—p. 437.

Hemolytic Anemia Produced by Feeding of Fat and Choline. J. E. Davis and J. B. Gross.—p. 444.

Effect of Certain Substances on Clotting Time in Vitro. C. F. Gerber and E. W. Blanchard.—p. 447.

Osmotic and Electrolyte Concentration Relationships During Absorption of Autogenous Serum from Ileal Segments. M. B. Visscher, R. R. Roepke and N. Lifson.—p. 457.

Production of Polycythemia by Cobalt in Rats Made Anemic by Diet Low in Protein. J. M. Orten and Aline U. Orten.—p. 464.

Osmotic and Electrolyte Concentration Relationships During Absorption of Salt Solutions from Ileal Segments. M. B. Visscher and R. R. Roepke.—p. 468.

American Journal of Surgery, New York

69:281-414 (Sept.) 1945

Problem of Delayed Union and Nonunion of Fractures. H. C. Fett, R. F. Foote and M. A. L. Stevens.—p. 283.

Glass Plastic Cast. R. Anderson and H. R. Erickson.—p. 299.

Metallic Foreign Bodies and Electromagnetic Locator. J. J. Moorhead.—p. 306.

Embedment of Vitallium Mandibular Prosthesis as Integral Part of Operation for Removal of Adamantinoma. L. Winter, J. C. Lifton and A. S. McQuillan.—p. 318.

Thyroid Crisis: Pathogenesis of Hepatic Origin. B. J. Ficarra and E. A. Naclerio.—p. 325.

Fibromatous Skin Lesions Produced by Repeated Blood Serum Injections in Humans. W. Marshall.—p. 338.

Dissecting Aneurysm of Thoracic Aorta Due to Trauma. D. W. Leonard.—p. 344.

Use of Whole Skin Grafts as Substitute for Fascial Sutures in Treatment of Hernias: Preliminary Report. G. B. Mair.—p. 352.

Operative Cure of Inguinal Hernia in Infancy and Childhood. J. S. Coles.—p. 366.

Primary Malignant Disease of Small Intestine. T. A. Shallow, S. A. Eger and J. B. Carty.—p. 372.

Am. J. Syphilis, Gonorrhea and Ven. Dis., St. Louis

29:487-586 (Sept.) 1945

*Penicillin Treatment of Neurosyphilis: Preliminary Report of 70 Cases Followed from Four to Twelve Months. A. S. Rose, L. D. Trevett, J. A. Hindle, C. Prout and H. C. Solomon.—p. 487.
*Public Health Aspect of Malaria Therapy of Neurosyphilis. W. L. Bruetsch.—p. 494.
Serologic Differentiation of Syphilitic and False Positive Serums. V. Scott, C. R. Rein, I. L. Schamberg, J. E. Moore and H. Eagle. —p. 505.
*Prognosis of Syphilis: Critical Review of Clinical, Autopsy and Life Insurance Studies. I. L. Schamberg.—p. 529.
Cooperation in Venereal Disease Control at Naval Training Center: Comparative Results of First Six Months of 1944 and Calendar Year 1943. R. H. Abrahamson and E. H. Harris.—p. 551.
Arterial Embolism Following Injection of Iodobismitol. L. J. Underwood.—p. 556.
Penicillin Treatment of Previously Untreated Acute Gonorrhea. R. Dyar, J. R. Scholtz and E. C. Hammond.—p. 562.
Treatment of Gonococcal Arthritis with Sulfonamides and Artificially Induced Fever. S. Solomon.—p. 567.

Penicillin Treatment of Neurosyphilis.—Rose and his associates treated at the Boston Psychopathic Hospital 106 patients with symptomatic neurosyphilis. The great majority of the patients received in addition to the penicillin either malaria or fever cabinet therapy in approximately half the amount generally accepted as sufficient. Penicillin was administered intramuscularly in doses of 50,000 Oxford units per injection for a total of sixty injections (3 million units). The time interval of injection was varied according to a plan designed to give the maximum information. Clinical and serologic results in 70 cases followed from four to twelve months revealed that of the 70 cases 28 were improved, 37 were unchanged, and 5 were worse. The greatest percentage of improvement was found among the 49 cases diagnosed as dementia paralytica. The most striking result was seen in 6 cases of primary optic atrophy, in 5 of which there may have been arrest of visual loss. Spinal fluid examinations revealed an immediate response of an elevation in cells and total protein in most of the previously untreated patients, followed by a general gradual reduction in cell count, total protein and, later, a decrease in the Wassermann titer. Comparison between the clinical and serologic results did not show definite correlation at this stage. Penicillin is an active and effective therapeutic agent for late neurosyphilis, but comparison with the serologic results shown by 30 patients treated by older methods indicates that there is no striking difference at this period of observation. The authors believe that the time has not arrived for the distribution of penicillin for general use in the treatment of neurosyphilis.

Malaria Therapy of Neurosyphilis.—Bruetsch states that the occurrence of an incidental case of malaria in an institution in which malaria therapy is practiced is not proof that the malaria infection was contracted from an inoculated patient. A critical review of the instances of malaria which have been reported as having their origin from therapeutic malaria leaves the impression that definite proof for this assertion is lacking in almost all cases. The theory that maintenance of malaria in the human host for prolonged periods by direct blood inoculation leads to "asexualization of the plasmodium" is not shared by most malariologists. Bruetsch is of the opinion that unfavorable ecologic requirements furnish the explanation for the fact that accidental transmission through therapeutic malaria practically never occurs.

Prognosis of Syphilis.—From a critical review of the literature Schamberg concludes that syphilis does not adversely influence life expectancy except through the known lethal effects of its serious late manifestations, particularly those of the central nervous and cardiovascular systems. There is no evidence that syphilitic infection per se, or antisyphilitic treatment, predisposes to tuberculosis, pneumonia, nephritis or other nonsyphilitic diseases. Increased mortality of syphilic patients is caused in part by deaths due directly to syphilis, in part to the higher death rate in segments of the population which have a high syphilis prevalence. Adequate antisyphilitic treatment will in the majority of cases prevent the development of the late manifestations of syphilis. The attitude of life insurance companies toward the syphilitic applicant is at present grossly unjust. Two sound courses of procedure would appear to be open to the insurance companies: (*a*) Disregard syphilis entirely. (*b*) Perform routine serologic tests for syphilis on every applicant for insurance. In those in whom positive or doubtful tests are discovered, death losses may be obviated by clinical and laboratory examination and by setting up criteria of adequate treatment. Applicants found to have adequately treated latent syphilis may be granted standard insurance with no extra premium, and the mortality in this group will be found to be a function of the mortality of the socioeconomic and occupational groups of which it is composed. On the basis of simple and well accepted clinical and laboratory procedures, the life insurance companies may insure at standard rates the majority of syphilitic persons applying for insurance, with no risk of increased death losses. Employers may safely hire syphilitic persons and obviate increased compensation costs through similar clinical evaluation of their employees.

Cancer Research, Baltimore

5:561-608 (Oct.) 1945

System of Grading Carcinogenic Potency. I. Berenblum.—p. 561.
Effect of Autoxidizability of Lipoidal Solvents on Sarcogenesis by 3,4-Benzpyrene. H. P. Rusch, G. C. Mueller and B. E. Kline.—p. 565.
Influence of Age on Calcium in Epidermal Carcinogenesis Induced by Methylcholanthrene in Mice. V. Suntzeff, C. Carruthers and E. V. Cowdry.—p. 572.
Chronic Inflammation and Carcinogenesis. W. H. Woglom.—p. 576.
Influence of Nontoxic Amounts of Estradiol on Carcinogenesis in Intact and Castrated Male and Female Mice of Marsh-Buffalo Strain. F. Bischoff, Louise P. Ingraham and Georgena J. Clarke.—p. 579.
Influence of Breeding on Incidence and Onset of Carcinoma of Mammary Gland in Marsh-Buffalo Mice. F. Bischoff.—p. 582.
Relative Importance of Milk Agent and Inherited Susceptibility to It in Development of Mammary Tumors in Mice. S. G. Warner, M. C. Reinhard and H. L. Goltz.—p. 584.

Epidemiol. Information Bulletin, Washington, D. C.

1:551-588 (Aug. 15) 1945. **Partial Index**

International Quarantine Diseases: I. Cholera. K. Stowman.—p. 551.
Latest Information on Cholera in China.—p. 562.

1:589-630 (Aug. 31) 1945. **Partial Index**

International Quarantine Diseases: II. Plague. K. Stowman.—p. 589.
Trend of Syphilis Cases in Europe.—p. 603.

1:631-672 (Sept. 15) 1945. **Partial Index**

Epidemiological Notes: Manila—Tuberculosis, Syphilis.—p. 631.
Id.: Berlin—Dysentery, Typhoid Fever, Diphtheria.—p. 634.
Id.: Rome—Pulmonary Tuberculosis.—p. 636.
Id.: Helsinski—Paratyphoid Fever.—p. 636.
Id.: Netherlands—Diphtheria Among Adults.—p. 637.
Tuberculosis Mortality in Europe, 1937-1944.—p. 666.

Indiana State Medical Assn. Journal, Indianapolis

38:289-372 (Sept.) 1945

*Temporal Arteritis. R. M. Vandivier and J. O. Ritchey.—p. 289.
Some Aspects of Cardiology as Seen at Veterans Administration, Indianapolis, Indiana. L. M. Sales.—p. 293.
Allergic Manifestations. M. S. Fox.—p. 295.
Penicillin by Mouth in Combination with Aluminum Dihydroxyaminoacetate. W. D. Paul, C. Rhomberg and Evelyn Wallace.—p. 298.
Transverse Incision in Pelvic Operations. M. L. Curtner.—p. 301.
Antiseptic Properties of Isopropyl Alcohol in Relation to Cold Sterilization.—H. M. Powell.—p. 303.

Temporal Arteritis.—Vandivier and Ritchey's 4 patients with temporal arteritis were all women past 69, were of a linear, asthenic type, were all of fair complexion with blue eyes and white hair and all had moderate hypertension. The most prominent symptom was pain over the region of the temporal artery and scalp, which was made worse by mastication and lying down. There was a moderate low grade fever, weight loss, weakness, sweating and a protracted period of asthenia and various degrees of incapacitation. Vague, generalized joint pains and pain in the back were common symptoms during the protracted convalescence. Clinical studies failed to show significant changes except a moderate leukocytosis and hypochromic anemia. The onset of the illness of 1 patient suggested heart failure; she had been sitting up in a chair for two weeks because of the pain experienced on lying down and had developed severe edema of the extremities. This edema disappeared when she changed from a sitting to a reclining posture. The onset in 1 other patient was attributed to dentures. In a third patient the onset had occurred following a slight injury to the head. These patients were nonsmokers. There was no evidence that resection of the involved artery was of therapeutic

value. In fact, 2 of the 3 patients who had a biopsy with a section of artery removed complained more bitterly of pain following this resection than before. Neither did they improve more rapidly than the patient who did not have a section of the artery removed. Low oscillometric readings in 1 case and absence of pedal pulsations in another suggest the possibility that the disease may be a generalized involvement of vessels other than the temporal vessels.

Iowa State Medical Society Journal, Des Moines

35:353-388 (Sept.) 1945

Medicine and Medical Education in the Postwar Era. E. M. MacEwen. —p. 353.
Treatment of Carcinoma of Prostate Gland, with Special Reference to Stilbestrol and Castration. L. E. Pierson.—p. 357.
Two Types of Feebleminded Patients. Grace M. Sawyer.—p. 359.

35:389-426 (Oct.) 1945

Some Clinical Considerations About So-Called Blackwater Fever Syndrome. R. Castaneda.—p. 389.
Rehabilitation of Deaf and Blind. C. E. Chenoweth.—p. 392.
Tumor Clinic: Its Function, Organization and Operation. E. G. Zimmerer.—p. 396.
Bright's Disease: Case Report. J. E. Flynn.—p. 399.

Journal of Allergy, St. Louis

16:1-260 (Sept.) 1945

Atopy to Simple Chemical Compounds—Sulfonechloramides. S. M. Feinberg and R. M. Watrous.—p. 209.
Reactions to Antipneumococcus Rabbit Serum: Role of Reversed Passive Anaphylaxis and of Inherent Toxicity of Antiserum; Failure of Heat to Separate Sensitizing from Therapeutic Antibody; Experimental and Clinical Study. O. Swineford Jr., with technical assistance of Margaret B. Robinson.—p. 221.
Electrolyte Excretion with Various Forms of Therapy in Bronchial Asthma. A. V. Stoesser and Marguerite Booth.—p. 232.
Sputum Cholesterol in Bronchial Astbma. A. M. Fuchs, W. C. Spain and Margaret B. Strauss.—p. 246.
Atopic Sensitivity to Caroid (Papain): Report of Case, with Discussion of Some of Properties and Uses of Drug. H. Osgood.—p. 245.
Skin Sensitivity in the Aged: Fatality Following Intradermal Tests. J. R. Wiseman and Marguerite P. McCarthy-Brough.—p. 250.
Simple Method for Preparing Strained Meat Formulas. G. J. Stuart. —p. 253.

Atopy to Simple Chemical Compounds.—Feinberg and Watrous report that a number of workers in a pharmaceutical factory experienced symptoms of asthma and hay fever on inhaling small amounts of the dust of two organic substances, chloramine-T and halazone. These workers became sensitized while working where these chemicals were manufactured or packaged. When removed from contact with the chemicals they were relieved of their symptoms. The exhaust of some of the dust into the outside air contaminated the air sufficiently so that most of the sensitized persons stationed in other buildings as far as 300 yards away experienced respiratory symptoms when the wind blew from the direction of the chloramine factory. The study of the first patient gave evidence that this was a specific allergic phenomenon. Asthma and rhinitis due to the inhalation of dust of the water disinfectants chloramine-T and halazone were observed in 14 workers. These simple chemical substances of low molecular weight have been shown to behave as true atopens by producing immediate whealing skin reactions by direct test and by passive transfer. This experience suggests that such simple chemicals may act as complete antigens, that simple chemical allergens, as yet of unidentified nature, may be present in food, drink and air and that chemical irritants hitherto regarded as acting in a nonspecific manner may, on reexamination, exhibit specific allergenic behavior.

Reactions to Antipneumococcus Rabbit Serum.—According to Swineford, untoward reactions to therapeutic injections of antipneumococcus serum vary in incidence and severity. Death follows about one in five hundred injections of serum. This study was begun with the idea that the phenomenon of reversed passive anaphylaxis would explain the anaphylactic reactions that follow antipneumococcus serum injections in patients who had negative cutaneous, conjunctival and intravenous reactions to the serum. Experiments on guinea pigs and rabbits and a tabulation of some antipneumococcus serum reactions in patients are presented to support this idea. In reversed passive anaphylaxis the subject is sensitized by the presence of antigen and is shocked, after an interval, by immune serum—a reversal of the sequence in conventional passive anaphylaxis. One batch of serum was found to be highly toxic for guinea pigs, suggesting the possible role of toxic serum in the circulatory type of reaction. Attempts to separate the sensitizing or anaphylactic antibody from the therapeutic antibody by heating the serum were unsuccessful. The number and severity of circulatory and reversed passive-anaphylactic reactions to antipneumococcus rabbit serum might be lessened by intravenous tests for toxicity on guinea pigs before releasing serum for clinical use, by the uniform use of immune serum instead of or in conjunction with normal serum for cutaneous, conjunctival and intravenous tests for sensitivity and by a second intravenous test dose of perhaps 3 cc. of immune serum.

Journal Industrial Hygiene & Toxicology, Baltimore

27:183-246 (Sept.) 1945

Microdetermination of Stibine. S. H. Webster and L. T. Fairhall. —p. 183.
Fluorescent Mineral Dusts as Tracers for Localization of Particles in Tissue. H. Yagoda and D. D. Donahue.—p. 193.
Potency of Silica Particles of Different Size. B. D. Tebbens, R. Z. Schulz and P. Drinker.—p. 199.
Concentration of Arsenic in Tobacco Smoke Determined by Rapid Titrimetric Method. M. D. Thomas and T. R. Collier.—p. 201.
Fatal Case of Poisoning by Oxides of Nitrogen. A. T. Rossano Jr. —p. 207.

Journal of International College of Surgeons, Chicago

8:308-403 (July-Aug.) 1945

Frontal Sinus as Pathway of Infection to Calvarium and Brain. S. R. Skillern Jr.—p. 308.
Arteriovenous Aneurysms in Region of Circle of Willis from Ophthalmologic Aspect. E. B. Spaeth and W. E. Krewson.—p. 313.
Naval Medical Officer's Surgical Problems in Amphibious Warfare. R. A. Kern.—p. 326.
Huge Pedunculated Fibrolipoma: Report of 2 Cases and Review of Literature on Vulvar Fibromas. D. Kershner and A. L. Shapiro. —p 333.
Subtotal Gastric Resection for Peptic Ulcers. S. J. Carnazzo.—p. 336.
Torsion of Gallbladder Associated with Acute Appendicitis. C. W. Husband and N. L. Schmitt.—p. 348.
Role of Second Toe in Bunionectomies. A. Gottlieb.—p. 352.
Medical and Surgical Services (Military and Civil) in Dominican Republic. M. A. Robiou.—p. 354.
Hospital Assistance. M. A. Manzanilla.—p. 369.
Brief Historical Data on Some of Oldest Hospitals of the Americas. A. Molina.—p. 376.
Treatment of Cancer of Penis: Present Concepts. A. H. Roffo and G. Iacapraro.—p. 384.
Splanchnic Abdominal Pains. M. Lopez Esnaurrizar.—p. 400.

Journal of Nat. Cancer Inst., Washington, D. C.

6:1-88 (Aug.) 1945

Nutritional Factors Influencing Origin and Development of Cancer. H. P. Morris.—p. 1.
Occurrence of Hepatomas in Rats Following Ingestion of 1,2-Benzanthracene. Florence R. White and A. B. Eschenbrenner.—p. 19.
Estimation of 2-Aminofluorene and Related Compounds in Biologic Material. B. B. Westfall.—p. 23.
Effects of Cystine and Calory Restriction on Incidence of Spontaneous Pulmonary Tumors in Strain A Mice. C. D. Larsen and W. E. Heston.—p. 31.
Variations in Occurrence of Pathologic Calcification, Nephritis and Amyloidosis in Mice Fed Control and Modified Diets. W. E. Heston, C. D. Larsen and Margaret K. Deringer.—p. 41.
Catheptic Activities of Neoplasm and of Tissues of Normal and Tumor Bearing Mice Correlated with Histologic Changes. Mary E. Maver and Thelma B. Dunn.—p. 49.
Desaminases for Ribosenucleic and Desoxyribosenucleic Acids. J. P. Greenstein and H. W. Chalkley.—p. 61.
Vascular Reactions of Normal and Malignant Tissues in Vivo: I. Vascular Reactions of Mice to Wounds and to Normal and Neoplastic Transplants. G. H. Algire and H. W. Chalkley.—p. 73.

Journal of Neurophysiology, Springfield, Ill.

8:275-338 (Sept.) 1945

Generalized Atonia and Profound Dysreflexia Following Transection of Brain Stem Through Cephalic Pons. A. D. Keller.—p. 275.
Facilitation of Flexion Reflex in Relation to Pain After Nerve Injuries (Causalgia). E. L. Porter and A. N. Taylor.—p. 289.
Electrical Activity of Denervated Mammalian Skeletal Muscle as Influenced by D-Tubocurarine. A. R. McIntyre, R. E. King and A. L. Dunn.—p. 297.
Electrical Activity of Thalamus and Basal Ganglia in Decorticate Cats. R. S. Morison and D. L. Bassett.—p. 309.
Nerve Regeneration in Cats on Vitamin B_1 Deficient Diets. C. Berry, C. Neumann and J. C. Hinsey.—p. 315.
Lumbar Sympathetic Dermatomes in Man Determined by Electrical Skin Resistance Method. C. P. Richter and B. G. Woodruff.—p. 323.

Surgery, St. Louis

18:267-400 (Sept.) 1945

Lateral Cervical (Branchial) Cysts and Fistulas: Clinical and Pathologic Study. H. B. Neel and J. de J. Pemberton.—p. 267.
Use of Skin Flaps in Repair of Scarred or Ulcerative Defects Over Bone and Tendons. E. C. Padgett and J. H. Gaskins.—p. 287.
Practical Aspects of Treatment of Burns. S. A. Siegel, L. V. Marrone and D. Gordon.—p. 298.
Mortality Factors in Acute Appendicitis. S. O. Hoerr.—p. 305.
Technic and Results of Primary and Secondary Pullthrough Operation After Removal of Tumors of Rectum and Rectosigmoid. F. Mandl. —p. 318.
Acute Colonic Obstruction Secondary to Carcinoma of Sigmoid Colon with Gangrene of Extensive Segment of Large Bowel: Case Report. A. J. Kremen.—p. 335.
Use of Transverse Abdominal Incision in, and Comments on, Surgical Treatment of Infantile Pyloric Stenosis. E. Horgan.—p. 339.
Gangrenous Cystitis: Etiologic Classification and Treatment. D. S. Cristol and L. F. Greene.—p. 343.
*Human Fibrin Foam with Thrombin as Hemostatic Agent in General Surgery: Experimental Studies and Clinical Use. O. T. Bailey, F. D. Ingraham, O. Swenson, J. J. Lowrey and E. A. Bering.—p. 347.
*Occurrence of Bacillus Histolyticus in Accidental Wounds Without Recognized Specific Infection. I. C. Hall.—p. 369.
Occurrence and Possible Significance of Bacillus Tetani in Compound Fractures, Lacerations, Gunshot Wounds and Burns. I. C. Hall. —p. 377.
Gynecomastia: II. Report of 5 Additional Cases. E. F. Gooel.—p. 388.
Case Report of Bilateral Arteriovenous Aneurysms of Posterior Tibial Arteries, with Interesting Observation Concerning Effect of Vasodilatation. J. R. Plank.—p. 391.
Improved Method of Circumcision: Use of Relaxation Incisions, Cotton Ligatures and Sutures. I. Gersh.—p. 394.

Fibrin Foam with Thrombin.—Bailey and his co-workers found that fibrin foam with thrombin is an effective absorbable hemostatic agent in the liver, peritoneal cavity, abdominal wall, kidney and lung. In each of these locations the absorption of the material is accompanied by only slight tissue reaction. Clinical appraisal of fibrin foam with thrombin as an absorbable hemostatic agent in general surgery has been carried out on 240 patients. It has proved effective in controlling oozing surfaces and venous bleeding under a wide variety of circumstances, including wounds in patients with hemophilia. The use of fibrin foam with thrombin should not replace the careful control of bleeding by means of careful dissection and adequate placing of sutures. It should be reserved for those situations in which an absorbable hemostatic agent is desirable to prevent the injuring of vital anatomic structures or to control oozing which is not easily stopped by conventional methods, as in the beds of tumors and the cut surface of parenchymatous organs.

Bacillus Histolyticus in Accidental Wounds.—Hall found Bacillus histolyticus in 18 of approximately 2,500 civilian wounds. Only 1 of these resulted in death. There were 7 cases of compound fractures in which B. histolyticus was discovered. All but 1 of these patients survived, 2 without infection, 1 with trivial infection and 3 with serious infections. With one exception B. histolyticus appeared only in the cultures made from the debrided tissues. In 1 instance B. histolyticus persisted until the twenty-fifth day, at which time the leg was amputated. Of the 5 cases of lacerations from which B. histolyticus was recovered, 2 wounds healed without infection and 1 healed after a minor infection, while 2 healed after serious infection. B. histolyticus was demonstrated again only in the debrided tissues from these cases. In 2 of the 3 patients with gunshot wounds B. histolyticus was recovered only from the debrided tissues; in the third case it was also discovered later. In both patients with burns B. histolyticus was recovered from the debrided tissues but not later. The debrided tissues were minutely studied in these cases as a means of determining the potential pathogenic agents. Hall does not advocate such cultures routinely, since they have little relation to the subsequent development of infections if surgical treatment is instituted within a reasonable time. Hall regards the occurrence of B. histolyticus in wounds solely as an expression of its widespread occurrence in nature. If wounds are promptly and adequately debrided, it rarely persists. If gaseous gangrene develops, the peculiar lesions produced by this organism in pure infections are likely to be masked and overlooked. It may persist in a mixed infection for twenty-five to thirty-seven days without giving clinical indications of its presence.

United States Naval Med. Bulletin, Washington, D. C.

45:611-818 (Oct.) 1945. **Partial Index**

Treatment of Combat Fatigue in Forward Area Hospital. J. W. Owen, C. G. D. Tillman and R. A. Brunner.—p. 611.
Evaluation of Motion Sickness Questionnaire in Predicting Susceptibility to Seasickness. J. E. Birren, M. B. Fisher and R. T. Stormont. —p. 629.
Evaluation of Comparative Efficiency of Various Methods of Mass Radiography. C. F. Behrens, H. E. Hilleboe, H. F. A. Long and J. Yerushalmy.—p. 635.
Mechanism of T Deflection in Precordial Electrocardiogram. A. H. R. Douglas.—p. 647.
Fibrous Dysplasia: "Cystic" Lesion of Bone. H. M. Stauffer and P. J. Fitzgerald.—p. 653.
Eosinophilic Granuloma of Bone. P. Michael and N. C. Norcross. —p. 661.
*Diphtheria Outbreak at Large Naval Training Center. D. C. Young, B. B. Breese, A. F. Errington and others.—p. 669.
Sprained Ankles: New Form of Treatment. W. Scott.—p. 679.
Nephropexy. F. A. Beneventi.—p. 685.
Method for Removing Ureteral Calculi by Continuous Internal Traction. D. T. Prehn.—p. 695.
Surgical Phase of Amphibious Warfare. J. N. O'Neill.—p. 705.
Care of Thoracic Wounds as Adapted to Pacific Theater. W. L. Rogers and E. Holman.—p. 711.
Special Treatment Ward for Critically Injured. R. P. McCombs.—p. 717.
Penetrating Wounds of Face and Neck: Tentative Treatment. E. N. Broyles.—p. 723.
Prevention of Transfusion Reactions. H. K. Russell and F. T. Hess. —p. 725.

Diphtheria Outbreak at Naval Training Center.—During two late summer months of 1944 an outbreak of diphtheria occurred in three companies of one camp at a large naval training center. Twenty-four patients and 16 carriers were admitted to the dispensary or hospital. Contacts in barracks and in sickbay were responsible for the cases. The outbreak was complicated by a concurrent epidemic of streptococcic disease. The cases of diphtheria were mild to moderate in severity and were apparently caused by the intermedius type. No deaths or serious complications occurred. The majority of the men had positive Schick reactions. A history of previous immunization for diphtheria did not guarantee a negative Schick test or the prevention of clinical diphtheria. Three cases of diphtheria developed in men with known negative Schick tests. Rigorous isolation of the patients and affected companies prevented further spread of the infection.

Wisconsin Medical Journal, Madison

44:844-930 (Sept.) 1945

Physiologic Considerations in Postoperative Treatment. A. L. Mayfield. —p. 865.
Low Back Pain Due to Functional Decompensation of Back. E. D. W. Hauser.—p. 869.
Abnormal Genital Bleeding in Women Past Forty: Its Clinical Significance. B. E. Urdan and J. A. Klieger.—p. 873.
*Causes of Failure After Gastric Resection for Ulcer: Myth of Intractable Ulcer Together with Note Concerning Importance of Vascular Factor in Genesis of Ulcer. O. H. Wangensteen.—p. 878.
Simplified Transfusion Apparatus for Infants. A. W. Adamski.—p. 888.

44:977-1040 (Oct.) 1945

Treatment of Urinary Tract Infections. C. R. Marquardt.—p. 977.
Treatment of Backache: Neurosurgical Aspects. R. H. Quade.—p. 979.
Osteitis Deformans (Paget's Disease): Use of Aluminum Acetate in Treatment. Report of Case. L. E. Fazen.—p. 983.
Gallbladder Series. T. H. Flarity, H. A. Raube, W. A. Munn and T. J. Snodgrass.—p. 984.
Cardiopericardiopexy with Results: Report of Case. C. L. Kline.—p. 987.
Jejunal Ulcer as Complication of Gastroenterostomy. L. W. Hipke. —p. 989.
Human Ornithosis: Case. J. L. Ford and R. W. Kispert.—p. 991.

Gastric Resection for Ulcer.—At Wangensteen's clinic bleeding ulcer appears to be a more serious problem than perforated ulcer. Operating on such patients before their condition becomes critical will diminish deaths from hemorrhage. Such operations are trying and should be undertaken only by those prepared to deal with the exigencies of a gastric resection under difficult circumstances. Even superficial gastric erosions may provoke serious or even fatal hemorrhage. Local impairment of blood flow to the stomach and duodenum renders the mucosa more susceptible to injury by the acid peptic digestive juice. Severe gastric hemorrhage has been observed in a patient with arterial thrombosis of the intramural gastric vessels. Gastrojejunal ulcer and gastrojejunocolic fistula after gastric resection are traceable to defects in the initial operation. No recurrent ulcers have been observed in more than 300 patients who have undergone resections for duodenal or gastric ulcer.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Ophthalmology, London

29:389-444 (Aug.) 1945

Epidemic Keratoconjunctivitis in the Middle East: Clinical and Experimental Study. A. Feigenbaum, I. C. Michaelson and W. Kornblüth.—p. 389.
Etiology of Trachoma: Critical Review of Present Knowledge. J. O. W. Bland.—p. 407.
*Analysis of 100 Cases of Strabismus Treated Orthoptically. R. U. Gillan.—p. 420.
Penetration of Penicillin Into the Eye. R. E. Wright and C. H. Stuart-Harris.—p. 428.

Strabismus Treated Orthoptically.—Gillan presents an analysis of 100 cases in which the complete course of treatment was given in an orthoptic department. The main points on which information was sought were (1) the deviation present at the conclusion of treatment compared with that present at the beginning, whether without or with recourse to operation, and (2) the degree of binocular vision present at the conclusion of treatment compared with that existing at the beginning of treatment. The material for review consisted of 100 consecutive patients, 51 girls and 49 boys aged from 5 to 12 years, the average being 9 years. The deviations present were from 3 to 60 degrees. Of 63 patients treated by orthoptic means only, the eyes of 36 became straight or nearly straight and developed good stereoscopic vision. The conclusion is reached that an essential prerequisite to successful treatment by orthoptics only is the existence of simultaneous perception and fusion and a strabismus of not more than 25 degrees, preferably much less, viz. about 10 degrees. Of 37 patients receiving orthoptic treatment plus operation, the eyes of 23 became straight or nearly straight, and 17 developed good or fair stereoscopic vision. Good stereoscopic vision is an important factor in maintaining orthopsis even when operation has been performed. Of a control series of 50 patients who were under observation for an average of nine months and had no treatment except glasses, none developed orthopsis or stereoscopic vision. Analyzing the refractive findings in the 100 cases under review and the effects present as a result of wearing glasses at the beginning of treatment by orthopsis, the author says that only 3 were straightened with glasses and 25 showed reduction of the squint.

British Journal of Radiology, London

38:267-300 (Sept.) 1945

Planning of Diagnostic Radiologic Department in Large General or Teaching Hospital. E. R. Williams.—p. 267.
Causes and Prevention of Radiotherapeutic Edema of Larynx. B. Jolles.—p. 278.
War Wounds of Orbit and Eyeball. D. B. McGrigor and E. Samuel.—p. 284.
Review of Scandinavian Literature on Neuroradiology, 1939-1944. H. Davies.—p. 290.
Eggs of Bombyx Mori as Material for Radiobiologic Research. J. P. Lamarque. C. Gros.—p. 293.
Note on Effect of Spraying "Contact" Therapy Applicators with Aluminum. W. J. Meredith.—p. 297.
Isolated Secondary Deposit in Terminal Phalanx in Case of Squamous Cell Carcinoma of Lung. D. W. Smithers and L. R. W. Price.—p. 299.

British Medical Journal, London

2:273-308 (Sept. 1) 1945

Results of Routine Investigation for Rh Factor at N. W. London Depot. G. Plaut, M. L. Barrow and J. M. Abbott.—p. 273.
Acute Inversion of Uterus. J. V. O'Sullivan.—p. 282.
Administration of Penicillin by Intramuscular Infusion. E. C. Turton.—p. 283.
*Use of Benzedrine Sulfate by Psychopaths: Problem of Addiction. H. J. Shorvon.—p. 285.
*Erythema Nodosum and Tuberculosis. W. D. Gray.—p. 286.
Domiciliary Midwifery and the Family Doctor. D. D. Logan and E. K. MacKenzie.—p. 94.

Use of Amphetamine Sulfate by Psychopaths.—Certain psychopaths can tolerate amphetamine (benzedrine) in enormous doses and benefit from the therapy, as opposed to normal persons, who are intolerant of high doses. Shorvon's patient, a man aged 35, complained of depression, insomnia and nervousness. There was a family history of psychopathy. The patient had been a nail biter, had had periodic attacks of stammering, was enuretic up to the age of 12 and was not adapted at school. He was an unhappy reserved man with few friends, stubborn, anxious, highly strung, sensitive and easily depressed. In 1939 he had been a fire fighter and had gone through the London "blitzes" but had to "steel himself" to do so. At the time of admission he gave no indication that he had been taking amphetamine. Later he admitted that he had been taking large doses of amphetamine sulfate for over four years, the daily consumption being from twenty-five to thirty 5 mg. tablets for many months periodically. The only apparent withdrawal symptoms were increased restlessness and sleeplessness. There were no physical ill effects. After stopping the amphetamine the patient had great hunger, which confirms the fact that amphetamine reduces the appetite. Although the use of amphetamine was abruptly stopped when the patient entered the hospital, he made no request for it. Sleeplessness induced by amphetamine was well compensated by barbital. This case and others reported in the literature convinced the author that there is no evidence of physiologic damage from amphetamine even in prolonged and massive dosage.

Erythema Nodosum and Tuberculosis.—Of 9 patients with erythema nodosum, 3 were contacts of known cases of pulmonary tuberculosis, and another gave a family history of tuberculosis. Two had been visitors in a tuberculous household, and 2 more had relatives suffering from chronic cough who refused to be examined. Only 2 gave no history of suggestive contact. All the children gave a positive tuberculin reaction. The tuberculous lesions encountered were pleural effusion, pulmonary tuberculosis, phlyctenular conjunctivitis with corneal ulcers, tuberculous cervical glands, enlarged or calcified hilar glands and a simple primary complex. No history of rheumatism was given by any of the patients. Gray thinks that every patient with erythema nodosum should be regarded as having been newly infected with tuberculosis, and therefore search should be made among family and friends for the source of infection. While nothing serious may develop, the occurrence of ill health and minor tuberculous lesions is frequent enough to warrant attendance at a tuberculosis dispensary in every instance.

Lancet, London

2:293-324 (Sept. 8) 1945

*Renal Syndrome of Wide Distribution Induced Possibly by Renal Anoxia. B. G. Maegraith, R. E. Havard and D. S. Parsons.—p. 293.
*Transfusion and Anemic Heart. E. P. Sharpey-Schafer.—p. 296.
Local Spread of Drugs in Oral Cavity. A. B. MacGregor and D. A. Long.—p. 299.
The "Perfect AP" (Artificial Pneumothorax): How It Works. G. Day.—p. 300.
Toxin and Antitoxin Studies of Gas Gangrene in Man. J. D. MacLennan and R. G. MacFarlane.—p. 301.

Renal Syndrome Possibly Induced by Anoxia.—The syndrome discussed by Maegraith and his associates is a condition of impaired renal function, which usually develops in an acute illness. Oliguria or anuria is commonly the first sign. In patients who survive there is also a postanuric period of impaired renal function with nitrogen retention and often a copious unconcentrated urine. The postanuric period may last for several weeks, but eventually there is complete recovery. The reversible nature of the renal failure is the chief feature that distinguishes this syndrome from the other forms of nephritis. Certain of the features of the syndrome under consideration have been described by Fishberg under the title "larval" or "necrotizing" nephrosis or under the term "prerenal azotemia." Maegraith briefly described the syndrome in 1944 under the term "tubulovascular syndrome." The main features have been noted in widely differing conditions. The authors mention the anuria seen in blackwater fever, incompatible blood transfusion and the crush syndrome. Other conditions in which features of this renal syndrome have been observed are septic abortion, concealed accidental hemorrhage, cholera, yellow fever, Weil's disease, diabetes, war injuries and pernicious anemia. Three different causes have been suggested for this syndrome: mechanical blockage, a nephrotoxic effect and renal anoxia. The theory of mechanical

blockage does not account for the many similar cases of anuria in which pigment is absent, and it has now been abandoned. In weighing the last two hypotheses the wide distribution of the syndrome must be taken into consideration. The nephrotoxic theory demands that a wide variety of toxins, many of them hypothetical or at least unidentified, shall all produce syndromes which are similar in their clinical and pathologic appearances. The one common factor may be a temporary shortage of oxygen. The evidence available favors the hypothesis that renal anoxia plays a large part in producing this syndrome, in that it results in damage to the renal epithelium and consequent impairment of renal concentrating power. The oliguria and anuria that occur in many instances are probably the direct result of the disturbances of renal blood flow that follow peripheral circulatory failure. If this is correct the prevention of anuria in these conditions will then depend more on the support given to the circulation than on efforts to keep the urine alkaline. The authors suggest that "renal anoxia" is a suitable name for the syndrome.

Transfusion and the Anemic Heart.—Sharpey-Schafer studied the effects of transfusion on circulatory dynamics by means of cardiac catheterization, a method allowing serial measurement of the output of the heart and the pressure in the right auricle. The blood volume in severe anemia is reduced and the right auricular pressure, cardiac output and percentage utilization of available arterial oxygen are increased. Transfusion raises the right auricular pressure and in normal subjects increases cardiac output, but in severe anemia cardiac output may fall. Acute pulmonary edema follows in some cases and the blood pressure may rise. This falling cardiac output is similar to Starling's overloaded heart-lung preparation, in which increased venous filling pressure results in falling cardiac output. Whereas intravenous infusions of 2,000 cc. at rates up to 160 cc. per minute have no deleterious effect on the normal human heart, Sharpey-Schafer found that 500 cc. at more moderate rates may overload the anemic heart. The usual practice of small transfusions of concentrated corpuscles is correct, but even a pint may prove too much. Assessment of venous filling pressure, therefore, is of some importance when transfusions are given. Clinical observation of the neck veins will give such information and prevent many disasters. The propped-up position is probably the best for transfusing severely anemic patients, for in this posture the right auricular pressure is lower than in the supine position. Clinical signs may not always prove adequate, and the most difficult cases require full investigation if treatment is to be rational.

Medical Journal of Australia, Sydney

2:65-96 (July 21) 1945

Bronchiectasis. H. B. Harwood.—p. 65.
Clinical Differentiation of Appendicitis and Dysenteries. T. F. Rose. —p. 72.
Blood Groups in Territory of Papua. J. J. Graydon and R. T. Simmons.—p. 77.
Toxemia. E. Singer.—p. 80.

2:97-132 (July 28) 1945

Influence of Diet in Health and Disease. N. M. Gutteridge.—p. 97.
Infections with Psittacosis in Adelaide. C. Yeatman and Jessica McEwin.—p. 109.
Systemic Administration of Penicillin. J. Dow and P. Martin.—p. 114.

Archives Françaises de Pédiatrie, Paris

2:1-44 (No. 1) 1944. **Partial Index**

*Generalized Subcutaneous Emphysema in Laryngeal Diphtheria: Contribution to Its Pathogenesis. M. Janbon, J. Chaptal and J. Andréani. —p. 1.
Infectious Hepatonephritis and Nuclear Icterus. J. Boucomont.—p. 8.

Emphysema in Laryngeal Diphtheria.—Janbon and his co-workers report 2 cases of subcutaneous emphysema complicating diphtheria in 2 girls aged 8 and 10 years. Diphtheria bacilli were demonstrated in the pharynx. In the first case two injections of antidiphtheric serum (15,000 and 10,000 units) proved ineffective; a third injection of 70,000 units was given and a tube inserted. The tube became obstructed by a pseudomembrane and was immediately removed. The inspiratory obstruction was only partially reduced. Subcutaneous emphysema of the neck and thorax was noted the next morning. It subsided slowly within the next six days. There was less respiratory embarrassment, but the presence of air in the mediastinum was suggested by the fact that several days passed before the dyspnea had disappeared. The presence of a pseudomembrane in the lumen of the bronchi may have caused the emphysema. This concept was supported by the observations in the second case. A single dose of antidiphtheric serum (35,000 units) was administered and within twelve hours the respiratory embarrassment was somewhat improved. A sudden fit of coughing caused a return of the inspiratory and expiratory dyspnea and within half an hour a subcutaneous emphysema became manifest in the neck, the face, the eyelids and the upper part of the thorax. Tracheotomy was performed. During intubation a pseudomembrane 4 cm. long was expelled in the shape of a fibrinous cast of a bronchial duct with two branches. Respiratory function was restored, but the emphysema increased within the next twenty-four hours. The presence of air in the soft tissues was demonstrated by x-ray. There was also atelectasis and emphysema. The emphysema slowly disappeared in the course of a few days. Tracheotomy is the method of choice, since intubation removes only the laryngeal obstruction, while tracheotomy provides for the escape of air from the mediastinum as well.

Annales Pædiatrici, Basel

164:169-224 (April) 1945

*Dystonia Musculorum Progressiva (Torsion Dystonia). Cornelia de Lange.—p. 169.
Superior Mediastinal Pleurisy in Young Children. G. Hartmann-Stehelin.—p. 182.
Hemopericardium of Traumatic Origin Presenting Aspects of Pericarditic Cirrhosis. L. Wolff-Wiesinger.—p. 209.

Torsion Dystonia.—Cornelia de Lange made microscopic studies of the brain, the greater part of the spinal cord and the visceral organs of a Jewish man who died at 45 and in whom the disorder began at the age of 8. The diagnosis of dystonia musculorum progressiva was verified by competent neurologists. The corpus striatum proved practically normal, but different parts of the brain and the cord presented anomalies which doubtless had a degenerative "anlage." The author is of the opinion that in the idiopathic or degenerative cases of dystonia there exist no specific anatomic changes but that the disorder is the result of a disturbance in the dynamics of the brain, spinal cord, nerves and muscles. The basis of this disturbance might be a metabolic process which produces no changes that are microscopically demonstrable.

Medicina, Buenos Aires

5:347-476 (July) 1945. **Partial Index**

*Myxedema of Hypophysial Origin: Case. E. B. Del Castillo, N. Quirno, M. A. Gambin and J. Manzuoli.—p. 416.

Myxedema of Hypophysial Origin.—According to Castillo and his collaborators myxedema of hypophysial origin is a variety of Simmonds' disease in which the pituitary body, the thyroid, the adrenals and the gonads are atrophied. The predominant symptoms are those of thyroid insufficiency. The diagnosis is made in women on the presence of symptoms of thyroid, gonadal and adrenal insufficiency with atrophic vaginal mucosa, infantile uterus, loss of libido, bilateral atrophy of breasts and scanty or absent pubic and axillary hairs. Male patients are of the eunuchoid type with gonadal insufficiency. The arterial pressure is low. The intolerance of the patient to thyroid therapy confirms the diagnosis. The case reported by the authors is the eleventh in the literature. A woman aged 35 with myxedema and typical symptoms of the disease was given thyroid twice. In both instances the symptoms of hypothyroidism improved, but acute symptoms of adrenal insufficiency supervened and thyroid therapy had to be stopped. Patients with hypophysial myxedema may improve on daily administration of 0.05 Gm. of dried thyroid combined with serum gonadotropin treatment. Discontinuation of serum gonadotropin in the course of the treatment results in reappearance of the harmful effects of thyroid therapy. Thyroid therapy alone aggravates the adrenal insufficiency, while serum gonadotropin alone exerts no favorable effect on the clinical symptoms of myxedema.

Book Notices

Treatment in General Practice. By Harry Beckman, M.D., Professor of Pharmacology, Marquette University School of Medicine, Milwaukee, Wisconsin. Fifth edition. Cloth. Price, $10. Pp. 1,070. Philadelphia & London: W. B. Saunders Company, 1945.

When a medical book is in sufficient demand to pass into a fifth edition within fifteen years there must be reason for such popularity. There is no doubt that Beckman's Treatment in General Practice is widely used by the student, teacher and practitioner; nor is there any doubt concerning the usefulness of this volume and the wealth of information which it contains. Serving as a reference book and as a textbook, the work provides information on fluke infections, worm infections, allergic disturbances, deficiency diseases, endocrine disturbances, disturbances of menstruation, obesity and malnutrition, diseases of the gastrointestinal tract, diseases of the liver and bile passages, diseases of the respiratory tract, nephritis and nephrosis, disturbances caused by excessive heat, the anemias, blood disturbances other than the anemias, circulatory disturbances, eclampsia, hyperemesis gravidarum, genital urinary infections and stone, diseases of the lungs, diseases of geriatrics, diseases of the skin, acute poisoning, burns, shock, crush and blast syndromes, and toxic and other special features of sulfonamide therapy. The present edition includes for the first time entities from acute infections, lymphocytosis and airsickness to the Rh factor syndromes, toxoplasmosis and urogenital syndrome.

Concerning the purpose of the book, no explanation is needed for those who are familiar with its contents. Others who are yet to be introduced may anticipate with much pleasure a collection of facts concerning the treatment of disease, a collection which is based on an extensive bibliography and tempered by the author's experience. The format and style of writing continue to be pleasant, the manner of treatment of the subject to the point and offered with a minimum of waste of words. Occasionally one wonders about the need for mentioning treatments which are admitted by the author to be of little or no value, for example the use of patulin for common colds, but perhaps some will argue that the practicing physician will frequently want such negative information if for no other reason than to refresh his memory and perhaps convince patients who urge him to "do the latest" on the basis of newspaper articles.

Compared with other books offered as a source of information on treatment in general practice, this book will continue to rank high in favor. It is the sort of volume that one likes to have conveniently close, as it will be used frequently and freely.

Hey Groves' Synopsis of Surgery. Edited by Cecil P. G. Wakeley, C.B., D.Sc., F.R.C.S., Senior Surgeon to King's College Hospital, London. Twelfth edition. Cloth. Price, $6. Pp. 632, with 208 illustrations. Baltimore: William Wood & Company, 1945.

As the title implies, this volume represents an outline of surgery, including practically all its specialties. Of necessity, the material is brief but is arranged in a very clear, concise manner because of skilful use of headings and subheadings. The illustrations are poorly executed and not too well chosen. Numerous errors in principles are found. Too much emphasis is placed on the use of heat in the treatment of burn shock. The use and value of tetanus toxoid is not mentioned. The amount of tetanus antitoxin (viz. 500 units) recommended in the prophylaxis of tetanus would be considered too small by most surgeons. The discussion on treatment of shock is not very modern. The same may be said of the treatment of peritonitis; too little attention is paid to the use of decompression. The advice to give "prostigmin (1 cc.) every hour for six hours" in the treatment of peritonitis would be strongly condemned by most surgeons. The recommendation to resort to "continuous saline infusion by rectum" is highly dangerous without specific warning about the use of too much salt. No mention is made of the use of intravenous glucose or amino acids in the treatment of peritonitis. In fairness to the volume it should be emphasized that an enormous amount of factual data is included, but so much important data including pathology and physiology are omitted that use of the book by students would appear misleading and even dangerous.

The Intervertebral Disc with Special Reference to Rupture of the Annulus Fibrosus with Herniation of the Nucleus Pulposus. By F. Keith Bradford, M.D., and R. Glenn Spurling, M.D. Second edition. Fabrikoid. Price, $4. Pp. 192, with 70 illustrations. Springfield, Illinois: Charles C Thomas, Publisher, 1945.

After reviewing the second edition of this book, one is at a loss to understand the excuse for its publication, for with the exception of the chapter on cervical disks there is essentially no change. Readers have a right to expect that one who assumes to write a book is an authority. At least the book should be up to date. It is a volume of uncertainty and equivocation at a time when recent advances have completely transformed the field, both in diagnosis and in treatment, to one of accuracy and certainty. And they have stood the test of time. The diagnosis of defective disks is now so simple and free of error that contrast mediums in the spine are no longer indicated and should not be tolerated. Yet pages are devoted to their useless pictures. The diagnosis of defective disks by simple x-rays is pathognomonic in 75 per cent of the cases (by narrowing of one or more disks) and yet this simple interpretation is not recognized. The causes of failure of the operative treatment of disks—concealed disks, multiple disks and the operative removal of the entire disk—are now known and have been corrected and with vastly improved results, and yet these improvements, though well known to the writers, are ignored. The consideration of fusion operations, so frequently used as an adjunct to disk removals, is argued pro and con and without decision, despite the fact that it can be dogmatically stated that there are never reasons for fusions when disks are properly treated. Finally the authors lay great stress on the assumption that defective disks are confined to the nucleus pulposus when the mere inspection of one of the large sequestrums from protruding disks shows that it is largely fibrocartilage. And when nature cures a defective disk by absorption, the entire disk is absorbed—the operator's clue to successful treatment.

Textbook of Organic Chemistry. By E. Wertheim, Professor of Organic Chemistry in the University of Arkansas, Fayetteville, Ark. Second edition. Fabrikoid. Price, $4. Pp. 867, with 113 illustrations. Philadelphia: Blakiston Company, 1945.

In the first edition the author made an admirable attempt to refer to the medical uses of various compounds throughout the book—in this edition he continues to do so. The reader must not expect detailed or elaborate discussions of medical applications of compounds; in many instances one or two sentences are considered sufficient. The general topics are presented in the manner conventional for organic chemistry. The opening section on aliphatic chemistry is followed by the section on aromatic chemistry, of which the last few chapters are devoted to quick summary reviews of subjects of more interest to the physician. The chapter on alkaloids carries a number of structural formulas; one short chapter is devoted to glycosides, enzymes, hormones and vitamins. There is even one chapter devoted to the topic chemistry of the human body, which has a short section of interest concerning the effects of the chemical groups in an organic molecule on physiologic action. Like other more recent textbooks of organic chemistry to appear on the market, two general trends are extended in this book. First, the improved format—the free use of pictures and structural formulas, and the author's style of presenting the topics—is conducive to relatively easy reading. Second, a fair share of the book is devoted to chapters concerned with the role of organic chemistry in the biologic and medical sciences. Of necessity these chapters are very brief summaries, but they are supplemented at the end of each chapter by exceptionally fine references to more detailed articles.

Bentley and Driver's Text-Book of Pharmaceutical Chemistry. Revised by John Edmund Driver, M.A., Ph.D., M.Sc. Fourth edition. Cloth. Price, $7.50. Pp. 644, with 47 illustrations. New York, London & Toronto: Oxford University Press, 1945.

This textbook is composed of sections on analytical, inorganic and organic chemistry as they pertain to pharmacy and pharmaceutical chemistry. The book would probably be of value to technicians and students of pharmacy but the procedures outlined are based largely on those of the British Pharmacopeia. As such, the book loses a great deal of its importance to the American worker. Even at a lower price, one would expect a more substantial binding.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

PRACTICE OF ORTHOPTICS BY NONMEDICALLY TRAINED PERSONS

***To the Editor:*—In view of the spreading tendency to practice orthoptics by unqualified operators, please express an opinion about the practice in question. Specifically, I should like to know whether orthoptics is considered a branch of medicine or not and whether anybody could practice orthoptics of his own initiative (diagnosis of phorias or tropias and relative treatments) without committing an illegal act.**

Arthur A. Gallo, M.D., Farmingdale, N. Y.

[This inquiry has been referred to two prominent opthalmologists, whose respective replies follow.—EDITOR.]

ANSWER.—Orthoptics is defined as the treatment of ocular motor anomalies by remedial exercises. The technicians, "orthoptists," who administer this treatment are not licensed by the various states. However, the Committee on Motor Anomalies of the American Committee on Optics and Visual Physiology studied the problem of attempting to regulate the training and practice of orthoptic technicians. This committee recommended that an orthoptic council be formed composed of members of the three national societies—the American Academy of Ophthalmology, the Section on Ophthalmology of the American Medical Association and the American Ophthalmological Society. The American College of Surgeons was later added. The Council has been in operation since 1938 and discourages the practice of orthoptics except under the close supervision and direction of qualified ophthalmologists. Any one who claims to be able to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition and who shall either offer or undertake by any means or method to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition is practicing medicine. With this definition of the practice of medicine in mind, it is apparent that the practice of orthoptics must be considered as a part of the practice of medicine.

ANSWER.—Laws regulating the practice of medicine vary in different states. In general, stress is laid on the use of drugs, while the use of appliances such as spectacles or the use of manipulations or exercises or mental treatment or the like, which are so important a part of the practice of medicine, are deemed not to need regulation, probably because their dangers are not recognized. In some states (California, for example) diagnosis is deemed a part of the practice of medicine. Thus, a follower of Bates in Los Angeles, acting under expert legal advice, requires her patients to write down their own diagnosis. Then, as she does not use drugs and makes no diagnosis, she is, according to the law, not practicing medicine.

The problem is, on the one hand, to educate the public and the lawmakers to a better understanding of the scope of the practice of medicine and the indirect as well as the direct dangers of the practice of medicine by unqualified practitioners and, on the other hand, to include in the education of doctors of medicine a knowledge of the good features which undoubtedly underlie many of the irregular practices which arise from time to time, for example in orthoptics and allied fields of ophthalmology.

LEVELS OF EXCRETION OF HORMONES IN WOMEN

***To the Editor:*—Will you kindly inform me as to the changes in the gonadotropic and estrogenic hormones in the serum of pregnant women during pregnancy and following labor, and the levels of the gonadotropic and estrogenic hormones in normal nonpregnant women throughout the menstrual cycle? Have such studies been made of patients with mental derangements?**

M.D., New York.

ANSWER.—Within a few days after the first missed period chorionic gonadotropins appear in the body fluids such as the urine and blood in increasing quantities, so that by two or three weeks after the first missed period there may be as much as several thousand rat units found in a twenty-four hour output of urine. This substance is found in the serum in concentrations of 2 to 10 rat units per cubic centimeter at about this time. After about sixty to ninety days there is a tremendous increase in concentration of gonadotropin, so that there may be as much as ten times the amount stated found in both urine and blood, i. e. several hundred thousand units per twenty-four hour excretion of the urine or per liter of serum. This peak subsides and remains fairly constant at a level of from 3 to 10 thousand rat units per liter of serum or per twenty-four hour excretion of urine. Following delivery there is a disappearance from the body of the chorionic gonadotropin within four or five days, since the placenta is the site of formation.

The estrogens in the serum and urine of pregnant women increase gradually from the time of the first missed period and reach a peak before term at about 100,000 rat units excreted daily. This estrogen is in the form of estrone, estriol and estradiol, all of them being in the free state or combined with glycuronic acid. There is a change in the estrogen pattern, however, in the early months, at which time the estriol to estrogen ratio is 1 to 2 but at term 1 to 15, and also at this time there is a sudden rise in estradiol with the disappearance of the estrone. During abnormal states, such as toxemia, the relative amounts of chorionic gonadotropins and estrogens are altered with a relative increase in chorionic gonadotropins and a decrease in the estrogens. This alteration in ratio has been detected long before the symptoms of toxemia have appeared clinically (Smith, G. V., and Smith, O. W.: *J. Clin. Endocrinol.* **1**:470 [June] 1941. Freed, S. C.: Glandular Physiology and Therapy, Chicago, A. M. A., 1941, chapter 22). The hormone excretions in the normal women are quite varied. There is, however, a fairly consistent pattern in estrogen and gonadotropin excretion. There is apparently a biphasic excretion curve of estrogen, a rise appearing at the midperiod and another before the menses, with a rapid drop at the time of flow. The actual range in values run from about 5 rat units per twenty-four hour excretion of urine to about 100 rat units if the urine is hydrolyzed so as to free the conjugated estrogens. The peak at midterm indicates, apparently, ovulation. The second pattern indicates corpus luteum activity. The gonadotropic levels in the normally menstruating woman are inconsistent and without any clearcut pattern, although there seems to be an increase in level at about the midterm coincidental with ovulation in many women. Some have formed an increase before the menstrual flow or at other times during the cycle. Usually there is an insufficient amount of gonadotropins in a twenty-four hour specimen of urine to assay biologically, and it is only at a peak that enough is present to be detected, highly concentrated urinary extracts being used for this purpose.

Assays of both estrogens and gonadotropins have been made in women with mental derangements, but a significant difference in the normally menstruating or pregnant psychopathic woman from that of the normal woman does not exist.

PENICILLIN PREPARATIONS

***To the Editor:*—I have been told that excellent results are obtained in syphilis using 1 cc. of Delacillin containing 300,000 units per cubic centimeter of penicillin calcium in peanut oil with beeswax. This is given intramuscularly daily until eight doses have been injected. I am skeptical of the claims made and would appreciate an opinion.**

Gabriel E. Obester, M.D., Elizabeth, N. J.

***To the Editor:*—What is the present status of calcium-penicillin dissolved in beeswax peanut oil? A physician has informed me that several clinics have discarded its use as ineffectual because sufficient blood saturation could not be produced or maintained.**

L. A. Sagnalla, M.D., Los Angeles.

***To the Editor:*—Is the penicillin used in oral and topical products stable? What precautions must be taken in the house of the patient in order to preserve the efficacy of the penicillin for several days?**

M.D., Santiago De Chile.

ANSWER.—The use of Delacillin in the treatment of syphilis is still under investigation. The exact time and dose relationship has not been worked out in a sufficiently large number of cases to make valid any statements concerning the relative merits of this preparation in a dosage of 300,000 units per cubic centimeter for a period of eight days and the multiple injection technic with the sodium and calcium salt in isotonic solution of sodium chloride.

Penicillin suspended in beeswax and peanut oil is being used extensively; there seems to be no question that it is absorbed slowly from the muscles after injection. There has been some irregularity in the levels of penicillin observed in the blood following injection, depending on the technic of assay and the time interval for assay.

Penicillin manufactured for oral and topical use is stable within the expiration dates as published on the labels. The specifications published in THE JOURNAL, Aug. 18, 1945, page 1161, are those which have been set up and approved by the Food and Drug Administration of the Federal Security Agency.

TREATMENT FOLLOWING PENICILLIN FOR SYPHILIS

To the Editor:—I should like some information regarding follow-up therapy on those receiving penicillin for syphilis. Five patients with syphilis of duration greater than four years each received a total of 2,400,000 units of penicillin in sixty doses. Another patient of a duration of two years received the same amount, and an infant with congenital syphilis received 10,000 units every three hours for sixty injections. All were told to return at the end of three months for a repeat of the Wassermann test. The infant now has a negative reaction at the end of three months. At the end of the same time the patient who had the disease two years still has the same Wassermann reaction as before, 1 plus on the quantitative scale. One of those having the disease more than four years now has a Wassermann reaction of $+ + \pm$ 000 at the end of three months, but before the penicillin was started it was 2 plus. Two patients who had had syphilis for a duration of more than four years have remained stationary on the Wassermann report, and 1 has dropped 1 plus. The others have not yet reported for blood test. With the exception of the infant, all had received adequate treatment with arsenicals and bismuth compounds and had failed to respond with a negative Wassermann reaction. They were chosen for the penicillin therapy because of their failure to respond by the more conservative types of therapy. If the Wassermann reaction should show no reduction or be even more positive at the end of six months, what would be the procedure of choice? Should the penicillin be repeated alone or in combination with arsenicals or should one return to a yearly repetition of a course of arsenical and bismuth preparations? Would these patients be presumed to be Wassermann fast? If so, what would the procedure be then? If the Wassermann reaction should be reduced but still positive, what therapy should be instituted? If the Wassermann reaction is negative at the end of six months, what instructions about returning for periodic check-ups should be advised? One patient had a positive spinal fluid Wassermann reaction, as well as a paretic type of gold curve; if the fluid and blood should still be positive at the end of six months what course should be followed? What should be done if the fluid is negative and the blood positive?

M.D., Wisconsin.

ANSWER.—On the basis of the information given, the question seems to concern management following penicillin therapy of (1) 1 patient with infantile (early) congenital syphilis, (2) 1 patient with seropositive early latent syphilis (of two years' duration) who had received "adequate" chemotherapy prior to being given penicillin, (3) 1 patient with syphilis of the central nervous system and (4) 4 patients with seropositive late latent syphilis who had also received "adequate" standard chemotherapy prior to penicillin treatment.

1. In the infant with infantile congenital syphilis, the dosage of penicillin given could be considered to be adequate and the response of the blood serologic test normal. Subsequent medical follow-up should consist of a complete physical examination and blood serologic test every three months for the next year, with an examination of the spinal fluid once during this period. If the medical observations should remain normal, no additional treatment is indicated. If there should be any evidence of relapse, either clinical or laboratory, then treatment with double the initial dosage of penicillin could be considered.

2. There is insufficient information available as yet to be certain what can be expected from the treatment of early latent syphilis with penicillin because the initial clinical experimentation has concerned itself almost exclusively with symptomatic early and late syphilis in order to have definite clinical as well as laboratory measuring sticks to determine the effectiveness of the drug. It may be many months, or even several years, before definite procedures can be outlined for early latent syphilis. In a case like that described, a study of the spinal fluid, a complete cardiovascular evaluation and a general medical appraisal should be carried out to be certain that the persistingly positive blood test is not the result of detectible activity. If it is, then strict individualization is necessary; if it is not, then, since the blood serologic titer is very low, clinical observation and a blood serologic test once every six months for the next three to five years could be carried through without additional therapy. If there should occur a persistent increase of the blood serologic reaction during this period of observation, retreatment could be considered, using either double the original dose of penicillin alone or standard arsenic and bismuth chemotherapy in addition to penicillin, or arsenic and bismuth alone, the choice being one purely of individual preference on the part of the physician.

3. The penicillin treatment of central nervous system syphilis is still much in the experimental stage, so that it is difficult to outline authoritative standard procedures. The clinical and laboratory (both blood tests and spinal fluid studies) response has been good in some cases but not in others. In general, the dosage used, namely 2.4 million Oxford units in seven and one-half days in the treatment of the case cited, would be considered to be on the low side. Many experts working in this field are now using total dosages of 8 to 10 million Oxford units of sodium penicillin in syphilis of the central nervous system. One group of workers in this field has demonstrated to their own satisfaction that maximum improvement (clinical and laboratory) following administration of penicillin in central nervous system syphilis is reached in about four months after treatment. It is recommended, therefore, that retreatment with penicillin, when considered necessary because of failure of response to initial therapy, be given approximately 120 days after the first course. When larger dosages of penicillin are used in retreatment of such cases (4 to 8 million Oxford units) the period of treatment is likewise prolonged to not less than fifteen days. It cannot be stated at this time that penicillin has replaced other types of treatment (in particular fever therapy alone or chemotherapy in addition to fever therapy) in the treatment of central nervous system syphilis. The choice is one of individual medical preference. As in the past, in the care of patients with central nervous system syphilis a study of the spinal fluid should be repeated at six months intervals at least and the patient should remain under active medical supervision with the treatment individualized on the basis of response, rather than routinized.

4. The 4 other patients with seropositive late syphilis who have received adequate therapy with arsenic and bismuth would certainly fall in the category of Wassermann fast if each has a negative spinal fluid study and no clinical evidence of activity. Experience with penicillin treatment of such cases is likewise limited. Stokes et al. (Stokes, J. H.; Sternberg, T. H., and others: The Action of Penicillin in Late Syphilis, THE JOURNAL, Sept. 9, 1944, p. 73) report that, "irrespective of the system used, in all types of syphilis, penicillin causes reduction of syphilis reagin titer in the blood in from 50 to 60 per cent of late cases." Stokes and Beerman (Penicillin in Late Syphilis, *Am. J. Syph., Gonor. & Ven. Dis.* **29**:313 [May] 1945) later indicated that "in serologic fastness at moderate dosage penicillin is erratic and not notably effectual." Cases of this type are also cited in which an increase in syphilis reagin has followed penicillin therapy. This has also been observed following other modes of chemotherapy.

Accordingly there is no real evidence to date that penicillin will cause a favorable response of the blood serologic test of Wassermann fast cases when other modes of chemotherapy, adequately tried, have failed. The medical handling of this type of case in the present state of our knowledge should continue to be the same as it was before the advent of penicillin. In the absence of progression of the disease, periodic medical reappraisal (on a six to twelve months basis) to be certain that the disease is truly arrested is probably more important than are additional amounts of specific therapy.

MANAGEMENT OF EPILEPSY AND INSTITUTIONALIZATION

To the Editor:—A youth aged 22 has what appears to be psychic equivalents of epilepsy. He suddenly and without warning faints, falls to the floor, awakes shortly with a severe headache and an absent expression, and staggers aimlessly about in a sort of drunken reel until finally the attack passes and his head is clear. This recurs two or three times a day. The boy seems to have insight into his case, is of average intelligence and is anxious to make something of himself. His background is rich in psychiatric trauma. Up to the age of 17 he lived in an orphanage. Since then he has shifted for himself. For the last two years he has lived a sort of social outcast life, living unhappily in fear of attacks and embarrassment when they come. At present he seems determined to do something worth while with his life despite his attacks, yet I believe the society in which he lives would be loath to tolerate his presence. I am interested to know what society has to offer for this boy. Assuming that his attacks persist unabated, are there epileptic colonies or institutions sponsored by state or federal government where he might live and do some sort of useful work? If so, where are they located, particularly in Pennsylvania? What is the status on which patients are committed? Are they forced to go by law or are there voluntary institutions? Irvin Cutler, M.D., Philadelphia.

ANSWER.—The first consideration is whether the patient is receiving the best possible drug therapy. For those with psychomotor seizures this means diphenylhydantoin sodium to the limit of tolerance. Obviously, if seizures can be brought under relative control, institutionalization need not be considered. If indigent, he can be referred to the special clinic for the epileptic at the Jefferson Medical College of Philadelphia for both medical and social service assistance. Employment is preferable to confinement in an institution. Pennsylvania has two state colonies for the epileptic, one at Selingsgrove and the other at Oakbourne. The Passavant Colony at Rochester, Pa., is under the auspices of the Lutheran church. Patients may enter any of these voluntarily or be committed by court order. Additional information concerning the points raised may be secured from the American Epilepsy League, 50 State Street, Boston.

Popular books on the subject are:

Putnam, T. J.: Convulsive Disorders, Philadelphia, J. B. Lippincott & Company, 1942.

Lennox, W. G.: Science and Seizures, New York, Harper & Brothers, 1941.